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Natural Resources and Natural Law Part II: The Public Trust Doctrine

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NATURAL RESOURCES AND NATURAL LAW PART II: THE PUBLIC TRUST DOCTRINE

Robert W. Adler*

Abstract

Natural Resources and Natural Law Part I: Prior Appropriation analyzed claims by some western ranchers, grounded in natural law, that they have property rights in grazing resources on federal public lands through prior appropriation. Those advocates asserted their position in part through civil disobedience, sometimes including armed standoffs with federal officials. They also asserted that their duty to obey theistic natural law overrode any duty to obey the Nation's positive law. Similar claims that individual religious beliefs override positive law have been made recently regarding a range of other controversial issues, such as same-sex marriage, public insurance for birth control, and the right to bear arms. Prior appropriation doctrine is consistent with secular natural law theory. Existing positive law, however, accepts prior appropriation for western water rights but rejects its application to grazing rights on federal public lands, for reasons consistent with secular natural law. Natural law doctrine allows citizens advocate for change but requires them to respect the positive law of the societies in which they live. Separation of church and state also bars natural law claims based on religious doctrine unless those principles are also adopted in secular positive law.

This sequel addresses claims from the opposite side of the political-environmental spectrum that natural law provides one justification for the public trust doctrine, and that courts should enforce an atmospheric public trust to redress catastrophic global climate change. Although some religious groups have embraced environmental agendas supported by religious doctrine, public trust claims are secular in origin. Just as natural law provides support for prior appropriation, it supports the idea that some resources, such as water, wildlife, and air, should be held in common rather than made available for private ownership. From this perspective, the two doctrines merge into a single issue of resource allocation. Which resources are best made available for appropriation as private property, and which are best left in common? Natural law theory helps to explain the liberty and welfare goals that inform those choices. Positive law embraces the public trust doctrine with respect to some natural resources, and does not preclude its applicability to the atmosphere or other common resources.

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I. INTRODUCTION

Natural Resources and Natural Law Part I: Prior Appropriation (hereinafter *Prior Appropriation*)¹ evaluated claims by some western ranchers,² grounded partially in natural law, to appropriative property rights to federal public land resources. This companion article assesses similar natural law origins of the public trust doctrine, asserted from the opposite side of the political-environmental spectrum by environmental advocates. Those claims have heightened importance given litigation arguing that an atmospheric public trust obligates governments to combat climate change.³ The U.S. Court of Appeals for the Ninth Circuit recently

¹ Robert W. Adler, *Natural Resources and Natural Law Part I: Prior Appropriation*, 60 WM. & MARY L. REV. 739 (2019) (hereinafter *Prior Appropriation*).

² Because I do not presume these views to be universal or even a majority position among western ranchers, I referred to advocates for this position as “natural law ranch advocates.” See *id.* at 746-47.

³ For discussions of atmospheric trust litigation and the crisis of catastrophic climate change it seeks to redress, see, MARY CHRISTINA WOOD, *NATURE’S TRUST, ENVIRONMENTAL LAW FOR A NEW ECOLOGICAL AGE* 220-29 (2014); Mary Christina Wood

ordered dismissal of one atmospheric trust case for lack of standing, reasoning that the alleged harm was redressable only by political branches of government.⁴

Prior Appropriation concluded that, whether or not one accepts the validity of natural law in U.S. jurisprudence, it does not support private property rights in federal public lands based prior appropriation.⁵ First, even if one believes that natural law supports property rights in grazing or other resources, personal beliefs cannot override duly adopted positive law. The Establishment Clause of the First Amendment prevents any asserted supremacy of religious beliefs over applicable secular law, without impairing an individual's right to hold those beliefs under the Free Exercise clause.⁶ Moreover, a fundamental tenet of natural law is that, as members of an ordered society, individuals are bound to obey positive law even if they disagree with that law.⁷ The federal and state constitutions are the only means through which fundamental rights can be used to override positive law rules, and only through judicial process. Although there is a long tradition of using civil disobedience to protest perceived injustice, such as slavery, one must accept the legal consequences of that disobedience in order to employ the tactic.⁸

Second, although the prior appropriation water law has some natural law origins,⁹ all western states ratified the doctrine in their positive law,¹⁰ and the federal government sanctioned their authority to do so.¹¹ With respect to grazing rights on public lands, by contrast, pursuant to its plenary authority under the Property Clause,¹² the federal government rejected private property rights to federal grazing resources in favor of a license to graze and later a system of federal permitting.¹³

& Dan Galpern, *Atmospheric Recovery Litigation: Making the Fossil Fuel Industry Pay to Restore a Viable Climate System*, 45 ENVTL L. 259, 263 (2015).

⁴ *Juliana v. United States*, __ F.3d __, 2020 WL 254149 (9th Cir. 2020). Other courts have also dismissed cases involving public trust doctrine implications on atmospheric conditions. *See, e.g., Kanuk ex rel. Kanuk v. State, Dep't of Nat. Res.*, 335 P.3d 1088, 1103 (Alaska 2014) (dismissing the case on prudential grounds but mentioning that plaintiffs make "a good case"); *Chernaik v. Brown*, 295 Or. App. 584, 600, 436 P.3d 26, 35 (2019) (finding no conception of the public-trust doctrine in Oregon to impose fiduciary duties on the state to protect against the effects of climate change).

⁵ *See Prior Appropriation*, *supra* note 1, at 804-05.

⁶ U.S. CONST. amend. 1 ("Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof").

⁷ *See Prior Appropriation*, *supra* note 1, at 755 & n.70, 759 & n.92, 779.

⁸ *See id.* at 755-56, 779.

⁹ *See id.* at 780-86.

¹⁰ *See id.* at 789-93.

¹¹ *See id.* at 789-92.

¹² U.S. CONST. art. IV, § 3, cl. 2 ("The Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States").

¹³ *See Prior Appropriation*, *supra* note 1, Parts II.A.2, II.B.1.b.

Moreover, it is consistent with natural law principles for the federal government to categorize different public land and other resources for varying uses.¹⁴

Finally, it is debatable whether natural law supports claims to property rights in federal lands and resources based on historical use. Some scholars believe prior appropriation was a positive law response to the inadequacy of natural law-based riparian rights.¹⁵ If prior appropriation is a positive law doctrine, natural law cannot support prior appropriation rights to grazing or other public land resources in contravention of federal statutes and regulations.

Although ownership and use of federal public lands is an extremely important but contentious issue that commands significant public attention,¹⁶ the question of the legitimacy and utility of natural law extends well beyond that realm. Similar natural law-based claims have been made in the context of a wide range of high-profile public debates, including same-sex marriage, public funding of birth control, and the right to bear arms,¹⁷ and in the context of the public trust doctrine.

Prior Appropriation noted that some advocates for broader use of the public trust doctrine for environmental protection, including climate change mitigation, cite natural law to support their claims.¹⁸ For example, what some courts and scholars identify as Roman law origins of the doctrine, as summarized in *The Institutes of Justinian*¹⁹ provides: “By the law of nature these things are common to mankind—

¹⁴ See *Prior Appropriation*, *supra* note 1, at 803-04. This includes *res commune* or *res publicum* for resources believed to be most appropriate for common public use, such as national parks or wildlife refuges, and *res nullius* for resources such as water that can be made available for usufructuary rights so long as the corpus remains unimpaired or not substantially impaired for public uses such as navigation and fishing.

¹⁵ See Richard A. Epstein, *How Spontaneous? How Regulated?: The Evolution of Property Rights Systems*, 100 IOWA L. REV. 2341, 2350-59 (2015); *Prior Appropriation*, *supra* note 1, at 748, 799-801.

¹⁶ See Kirk Johnson, *Siege Has Ended, but Battle Over Public Lands Rages on*, THE NEW YORK TIMES, (Apr. 14, 2017), <https://www.nytimes.com/2017/04/14/us/public-lands-bundy-malheur-national-wildlife-refuge.html>, (discussing public land controversy in the west and its implications).

¹⁷ See *Prior Appropriation*, *supra* note 1, at 748-49.

¹⁸ See, e.g., Gerald Torres & Nathan Bellinger, *The Public Trust: The Law's DNA*, 4 WAKE FOREST J. L. & POL'Y 281 (2014); Michael C. Blumm & Rachel D. Guthrie, *Internationalizing the Public Trust Doctrine: Natural Law and Constitutional and Statutory Approaches to Fulfilling the Saxion Vision*, 45 U.C. DAVIS. L. REV. 741 (2012); George P. Smith II & Michael W. Sweeney, *The Public Trust Doctrine and Natural Law: Emanations Within A Penumbra*, 33 B.C. ENVTL. AFF. L. REV. 307, 341 (2006); Richard A. Epstein, *The Public Trust Doctrine*, 7 CATO J. 411 (1987).

¹⁹ Some cases incorrectly identify the *Institutes of Justinian* as a source of law, as if this work was a formally adopted Roman legal code. See, e.g., *Idaho v. Coeur d'Alene Tribe of Idaho*, 521 U.S. 261, 284 (1997); *Lawrence v. Clark County*, 254 P.3d 606, 608 (Nev. 2011); *Nat'l Audubon Soc. v. Superior Court*, 658 P.2d 709, 718 (Cal. 1983). It was actually part of a larger effort by Roman legal scholars, commissioned by Emperor Justinian in Byzantium toward the end of the Roman Empire (Sixth Century A.D.), to collect the body of Roman law into a single source. As such, it is more akin to a modern academic legal treatise or textbook than a legal code. See Bruce W. Frier, *The Roman Origins of the Public Trust*

the air, running water, the sea and consequently the shores of the sea.”²⁰ Other environmental advocates assert inherent or fundamental rights to a clean and healthy environment grounded similarly in natural law, among other sources.²¹

Environmental advocates cannot categorically reject natural law as a basis for property rights claims while simultaneously relying on natural law to support the public trust doctrine and other asserted environmental rights. To be consistent, these claims must be subjected to the same analysis and the same scrutiny as natural law-based claims made by natural law property advocates. To be valid, either the claims must be supported by duly adopted positive law in ways that are not true for property rights in federal lands, or they must have a firmer grounding in natural law principles, while not being contradicted by applicable positive law.

The purpose of this analysis is not to test the legitimacy of the public trust doctrine, any more than *Prior Appropriation* questioned the legitimacy of the prior appropriation doctrine. Prior appropriation clearly exists as a matter of positive water law in the western states. The issue in *Prior Appropriation* was the extent to which natural law supports assertions that it applies to grazing and other public resources. Likewise, the public trust doctrine has existed in American law at least since the early nineteenth century.²² It is recognized in positive law (judicial, legislative, constitutional), but the scope, purpose, and substance of the doctrine remains hotly disputed.²³ The critical question is where and how the doctrine applies, and whether it should expand to situations not previously recognized. This article evaluates the extent to which natural law supports such expansion but recognizes that any change must be implemented through positive law, via judicial evolution of the common law doctrine or by statute or constitution.

Nor does this analysis revisit the legitimacy of natural law relative to the predominant modern focus on positive law. That debate has been waged extensively elsewhere.²⁴ Rather, because some western property rights advocates and some

Doctrine, 32 J. ROMAN ARCHAEOLOGY 641, 642 (2019); Ewa M. Davison, *Enjoys Long Walks on the Beach: Washington’s Public Trust Doctrine and the Right of Pedestrian Passage over Private Tidelands*, 81 WASH. L. REV. 813, 830-31 (2006). A recent analysis co-authored by a law professor and a Roman law historian critiqued the same error by legal scholars, as well as the degree to which citation to the Institutes greatly oversimplifies the Roman law origins of the doctrine. J.B. Ruhl and Thomas A.J. McGinn, *The Roman Public Trust Doctrine: What Was it and Does it Support an Atmospheric Trust?*, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3440244.

²⁰ J. INST. 2.1.1 (italics added).

²¹ See *Prior Appropriation*, *supra* note 1, Part II.B.2.

²² See *Arnold v. Mundy*, 6 N.J.L. 1 (1821); *Carson v. Blazer*, 2 Binn. 475 (Penn. 1810). Including colonial cases and ordinances, the pedigree goes back even further. See Ruhl & McGinn, *supra* note 19, at 18 & nn. 68, 73 (identifying colonial court decisions applying English common law trust doctrine).

²³ See *infra* Part II.

²⁴ See H.L.A. HART, *THE CONCEPT OF LAW* (1961) (defending legal positivism); LON L. FULLER, *THE MORALITY OF LAW* (1964) (defending legal realism). See also, H.L.A. Hart, *Positivism and the Separation of Law and Morals*, 71 HARV. L.REV. 593 (1958); Lon L.

environmental advocates both assert legal claims that are potentially grounded in natural law, this analysis assumes the legitimacy of natural law as the original source of some kinds of legal rights and obligations.

Part II of this analysis explores competing theories about the legal history and sources of the public trust doctrine, including common law, constitutional law, and natural law. Part III analyzes the public trust doctrine according to the principles identified in *Prior Appropriation*, and evaluates the implications of the natural law perspective for the future of the doctrine. Part IV concludes that natural law supports and is consistent with the public trust doctrine and provides flexibility to apply it to the atmosphere and other common resources not yet subject to public trust scrutiny.

II. THE MULTIPLE ORIGINS AND SOURCES OF THE PUBLIC TRUST DOCTRINE

A. Introduction

Legal scholars have disputed the source and origins of the public trust doctrine extensively, without resolution.²⁵ The debate came in the wake of a now-famous article by Professor Joseph Sax urging courts to make more assertive use of the historical public trust doctrine to enhance protection of a range of public resources,²⁶ and intensified after some courts heeded Professor Sax's call to action.²⁷

At the more restrictive end of the spectrum, some believe the doctrine is a narrow doctrine of property law applicable only to property underlying navigable

Fuller, *Positivism and Fidelity to Law--A Reply to Professor Hart*, 71 HARV. L. REV. 630 (1958).

²⁵ See, e.g., Joseph D. Kearney & Thomas W. Merrill, *The Origins of the American Public Trust Doctrine: What Really Matters in Illinois Central*, 71 U. CHI. L. REV. 799 (2004); James R. Rasband, *The Disregarded Common Parentage of the Equal Footing and Public Trust Doctrines*, 32 LAND & WATER L. REV. 1 (1997); Douglas L. Grant, *Western Water Rights and the Public Trust Doctrine: Some Realism About the Takings Issue*, 27 ARIZ. ST. L.J. 423 (1995); Charles F. Wilkinson, *The Headwaters of the Public Trust: Some Thoughts on the Source and Scope of the Traditional Doctrine*, 19 ENVTL L. 425 (1989); Harrison C. Dunning, *The Public Trust: A Fundamental Doctrine of American Property Law*, 19 ENVTL L. 515 (1989); James L. Huffman, *A Fish Out of Water: The Public Trust Doctrine in a Constitutional Democracy*, 19 ENVTL L. 527 (1989); Richard A. Epstein, *The Public Trust Doctrine*, 7 CATO J. 411 (1987); Richard J. Lazarus, *Changing Conceptions of Property and Sovereignty in Natural Resources: Questioning the Public Trust Doctrine*, 71 IOWA L. REV. 631 (1986); Glenn J. MacGrady, *The Navigability Concept in the Civil and Common Law: Historical Development, Current Importance, and Some Doctrines that Don't Hold Water*, 3 FLA. ST. L. REV. 511 (1975).

²⁶ Joseph L. Sax, *The Public Trust Doctrine in Natural Resources Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970).

²⁷ See, e.g., *Matthews v. Bay Head Improvement Ass'n*, 471 A.2d 355 (N.J. 1984) (dry sand beaches); *Nat'l Audubon Soc.*, 658 P.2d 709 (non-navigable tributaries); *Kootenai Envtl Alliance v. Panhandle Yacht Club, Inc.*, 671 P.2d 1085 (Idaho 1983) (navigable lake).

waters, thus precluding further expansion to the atmosphere or to other resources.²⁸ Some scholars have proposed that the doctrine is incorporated into parts of the U.S. Constitution.²⁹ Other authors root the doctrine in a lengthy and diverse legal history, from the Institutes of Justinian to Magna Carta to Anglo-American common law.³⁰ These legal theories have included the idea that the public trust doctrine has origins in natural law,³¹ or that the doctrine is a fundamental attribute of sovereignty.³² As shown below, the sovereignty claim flows logically from other tenets of natural law.³³ Others believe the precise source of the doctrine is less relevant than its ability to fill important gaps in positive law pending an appropriate legislative response.³⁴

The applicable sources of law governing the public trust doctrine may help inform issues such as the propriety of applying the doctrine to the atmosphere and other public resources other than navigable waters. They may also be relevant to the degree to which there is a “floor” on applicability of the doctrine in individual states. Those issues were raised by the U.S. Supreme Court’s decision in *Illinois Central Railroad Co. v. Illinois*,³⁵ which upheld an action by the Illinois Legislature invalidating a previous grant to a railroad company of title to extensive holdings along the Chicago harbor. The Court grounded its holding in the historic public trust doctrine, but left unclear the source of law that applied, and whether the ruling was one of state or federal law.³⁶

²⁸ See, e.g., James L. Huffman, *Speaking of Inconvenient Truths—A History of the Public Trust Doctrine*, 18 DUKE ENVTL. L. & POL’Y FORUM 1 (2007); Rasband, *supra* note 25; MacGrady, *supra* note 25; Lazarus, *supra* note 25; Lloyd R. Cohen, *The Public Trust Doctrine: An Economic Perspective*, 29 CAL. W. L. REV. 239 (1992).

²⁹ See, e.g., Torres & Bellinger, *supra* note 18; Wilkinson, *supra* note 25; Epstein, *supra* note 25; Michael O’Loughlin, *Understanding the Public Trust Doctrine Through Due Process*, 58 B.C. L. REV. 1321 (2017).

³⁰ See, e.g., Sax, *supra* note 26; Wilkinson, *supra* note 25; Smith & Sweeney, *supra* note 18; Hope M. Babcock, *The Public Trust Doctrine: What a Tall Tale They Tell*, 61 S.C. L. REV. 393 (2009).

³¹ See *supra* note 18.

³² See, e.g., MICHAEL C. BLUMM & MARY CHRISTINA WOOD, *THE PUBLIC TRUST DOCTRINE IN ENVIRONMENTAL AND NATURAL RESOURCES LAW* 3-7 (2013); Torres & Bellinger, *supra* note 18, at 291; Wood & Galpern, *supra* note 3, at 263, 273-78.

³³ See *infra* Part II.E.4.

³⁴ See Babcock, *supra* note 30.

³⁵ 146 U.S. 387 (1892).

³⁶ Plaintiffs sued in state court, but defendants removed to federal court because the case as plead involved questions regarding construction of a federal statute and federal constitutional claims. *People of the State of Ill. v. Ill. Ctr. R.R. Co.*, 16 F. 881, 886-87 (N.D. Ill. 1888). The decision on the merits, however, did not ultimately turn on federal law. Although the Court decided the case on what ultimately appeared to be Illinois law, the case was decided nearly a half century before *Erie R.R. Co. v. Tompkins*, 304 U.S. 64 (1938), holding that federal courts must defer to state courts on rulings of state law.

The Supreme Court has since confirmed that each state has authority to determine the scope and applicability of the public trust doctrine in that state.³⁷ The Court has never held, however, that states are free to abandon the doctrine, suggesting that the doctrine has some minimum contours. These issues remain unresolved, in part, because most state variations in the doctrine reflect policy differences in the geographic scope of the doctrine,³⁸ or in the specific resources to which the doctrine applies.³⁹ No state since the *Illinois Central* case has successfully eliminated the doctrine⁴⁰ or curtailed it as substantially as in *Illinois Central*.⁴¹

Ultimately, there is some truth to all of the above theories. The public trust doctrine has roots in both the civil law tradition of Western Europe dating to the Roman Empire, and in the Anglo-American common law tradition. Its principles are consistent with those attributes of natural law that help explain the evolution of Anglo-American law. The public trust doctrine reached into colonial common law and statutory law; state constitutional, statutory, and common law; and federal constitutional, statutory, and common law. Rather than arguing for the dominance

³⁷ Cases confirming this result and post-dating *Illinois Central* include PPL Montana, LLC v. Montana, 656 U.S. 576, 604-605 (2012); Phillips Petroleum Co. v. Mississippi, 484 U.S. 469, 475 (1988); Oregon *ex rel.* State Land Bd. v. Corvallis Sand & Gravel Co., 429 U.S. 363, 370-71 (1977); Appleby v. City of New York, 271 U.S. 364, 395 (1926) (noting that “the conclusion reached [in *Illinois Central*] was necessarily a statement of Illinois law....”). The Court had reached the same conclusion before *Illinois Central*. See *Barney v. Keokuk*, 94 U.S. 324, 338 (1876); *Packer v. Byrd*, 137 U.S. 661 (1891). At times, however, the Supreme Court has described the public trust doctrine as “American law.” *E.g.*, *Coeur d’Alene Tribe of Idaho*, 521 U.S. at 284-86.

³⁸ Compare *Barney* 94 U.S. at 325 (following Iowa doctrine that property adjacent to navigable waters extends only to high water line) with *United States v. Chandler-Dunbar Co.*, 229 U.S. 53, 61 (1913) (applying Michigan doctrine that technical title extends to middle of stream beneath navigable waters); see also, Robin Kundis Craig, *A Comparative Guide to the Western States’ Public Trust Doctrines: Public Values, Private Rights, and the Evolution Toward an Ecological Public Trust*, 37 *ECOL. L.Q.* 53, 58 (2010) (describing considerable variations in public trust doctrine among western states); Robin Kundis Craig, *A Comparative Guide to the Eastern Public Trust Doctrines: Classifications of States, Property Rights, and State Summaries*, 16 *PENN ST. ENV’T L. REV.* 1, 25 (2007) (finding wide variety of public trust doctrines among eastern states).

³⁹ See *supra* note 27; see also Craig (Eastern States), *supra* note 38, at (explaining that eastern states treat oceans, coasts, and Great Lakes differently than other “navigable waters”); Craig (Western States), *supra* note 38, at 78 (examining how western states assign states property interest in not only the bed of navigable waters but the water itself).

⁴⁰ The Arizona Legislature attempted to do so by statute regarding most navigable waters, but that statute was invalidated based on the public trust doctrine and the Arizona Constitution. *Arizona Center for Law in the Public Interest v. Hassell*, 837 P.2d 158, 168-69 (Ariz. 1991); see also *San Carlos Apache Tribe v. County of Maricopa*, 972 P.2d 179, 199 (Ariz. 1999); *Defenders of Wildlife v. Hull*, 18 P.3d 722, 727-29 (Ariz. Ct. App. 2001).

⁴¹ In a case somewhat similar to *Illinois Central* but involving only the right of a railroad company to wharf out over extensive sections of Lake Erie, the Ohio Supreme Court affirmed that the state as trustee may not abandon its trust obligations over significant portions of a navigable waterway. *State v. Cleveland & Pittsburgh R.R. Co.*, 94 Ohio St. 61, 78-80 (1916).

of one source or another, a more fulsome analysis and explanation of the public trust doctrine requires an explanation of how each source of authority fits together. Such an integrated analysis, however, should begin with an exploration of the historical underpinnings of the doctrine.

B. Historical Underpinnings of the Public Trust Doctrine

There are at least two major historical underpinnings of the American public trust doctrine. One is based on the civil law tradition of the Roman Empire and parts of Europe thereafter. The other is grounded in medieval English law, embodied in Magna Carta and later statutes, which some argue simply restored what the English nobility viewed as their common law or “ancient” rights pre-dating the Norman Conquest. The relationship between those roots—and whether and how they intersect—is less clear. The history and details of both sources, and the degree to which they actually or appropriately influenced American judges and legislatures, also remain disputed and unclear. Because American judges are in no way bound by ancient Roman law or its more recent heirs, that historical root cannot be viewed as dispositive of the meaning or future of the modern American trust doctrine.

American common law began with the baseline of inherited English common law at the time of colonial settlement, but every state was free, through its judicial process, to modify that law as appropriate to its circumstances. Both Roman law and English common law have been invoked in state and federal jurisprudence, however, and thus cannot be ignored as an influence on the development of the American doctrine. The more salient question is the extent to which these historical should be considered when deciding the future scope and substance of public trust cases.

1. Roman Law

Most American courts finding public trust doctrine roots in Roman law cite to a brief summary statement in the *Institutes of Justinian*: “By the law of nature these things are common to mankind—the air, running water, the sea and consequently the shores of the sea.”⁴² This was the first in a series of general rules categorizing various kinds of property as common, private, or public.⁴³ As explained above, the *Institutes* were not a legal codification, but a legal textbook commissioned by Emperor Justinian in Byzantium, compiling earlier Roman law and accompanying a much more detailed Digest of Roman legal cases and other authorities.⁴⁴

⁴² J. INST. 2.1.1.

⁴³ *Id.* 2.1.1-2.1.6. Section 2.1.2 provided: “rivers and ports are public; hence the right of fishing in a port is common to all men.” Ensuing sections addressed riverbanks (2.1.4), and the seashore and the sea (2.1.5).

⁴⁴ See *supra* note 19; Ruhl and McGinn, *supra* note 19, at 13. Some scholars believe nevertheless that this codification of centuries of Roman law was one of the most important contributions of the Eastern Empire. See BERTRAND RUSSELL, THE HISTORY OF WESTERN PHILOSOPHY xvi, 373, 381 (1945).

Law professor J.B. Ruhl and Roman history professor Thomas A.J. McGinn recently critiqued, in an extremely detailed and historically nuanced analysis, what they view as a gross oversimplification of the degree to which both proponents and opponents of public trust expansion analyze the influence of Roman law on the American doctrine.⁴⁵ Roman law governing ownership and access to rivers, seashores, and other public resources, and regarding the categorization of property generally, was considerably more complex than was reflected in the simple proclamations in the *Institutes*, and developed over a period of centuries.⁴⁶ Ruhl and McGinn suggest that at least two Roman doctrines of property law, the *res communes omnium* (“things common to all”)⁴⁷ and the *res publicae* (“things in public use”),⁴⁸ provide support for the public trust concept. Thus, they conclude, these doctrines may have influenced later jurists on this issue⁴⁹ and provided an historical foundation for what ultimately became the American public trust doctrine, although not as clearly and as directly as some advocates suggest.⁵⁰

Even if Roman law addressed issues analogous to the modern public trust doctrine, however, by what pathway did it influence English or American jurists? Europe was in legal and political chaos during the centuries following the fall of the Western Roman Empire.⁵¹ Law and governance—to the extent it existed effectively at all—reflected persistent power struggles between the Roman Catholic Church, the Holy Roman Empire, emerging free city states, and monarchies that competed for power until the rise of nations such as France, Spain, and England.⁵² Any argument that Roman law proceeded in a straight line to England, therefore, seems fanciful. Moreover, in medieval feudal law and government, sovereignty and “public” ownership were vested in monarchs and the lesser nobility, not in the people at large.⁵³ The nobility often retained for themselves exclusive franchises in fisheries

⁴⁵ See Ruhl and McGinn, *supra* note 19, at 3-10. Earlier efforts to critique the asserted Roman origins of the doctrine included McGrady, *supra* note 25; and Patrick Deveney, *Title, Jus Publicum, and the Public Trust: An Historical Perspective*, 1 SEA GRANT L.J. 13 (1976). In fairness to Sax, in his seminal article he acknowledged that the status of Roman law on this issue was “very confused.” Sax, *supra* note 26, at 475.

⁴⁶ See Ruhl and McGinn, *supra* note 19, at 29-52; *see also* Frier, *supra* note 19, at 642-47. The Roman Empire, of course, went through multiple systems of governance.

⁴⁷ See Ruhl and McGinn, *supra* note 19, at 29.

⁴⁸ See *id.* at 52.

⁴⁹ See *id.* at 52-56.

⁵⁰ See *id.* at 60-61.

⁵¹ See generally RUSSELL, *supra* note 44, at 366-75; NIALL FERGUSON, *CIVILIZATION: THE WEST AND THE REST* 16-17, 257-59 (2011); *see also* THOMAS H. GREER & GAVIN LEWIS, *A BRIEF HISTORY OF THE WESTERN WORLD*, 139-177 (6th ed. 1992).

⁵² See GREER & LEWIS *supra* note 51, at 209-14; RUSSELL, *supra* note 44, at 301-07, 478-87.

⁵³ See GREER & LEWIS, *supra* note 51, at 215-223 (explaining landownership by kings and lords rather than the people at large); STEWART C. EASTON, *THE WESTERN HERITAGE* 205-209 (explaining peasants’ use of land and duties owed to a lord).

and other public resources or granted those rights to favored subjects.⁵⁴ That was the antithesis of the public trust.

Nevertheless, Roman law did not simply disappear in the medieval period.⁵⁵ Scholars have documented public trust concepts deriving from Roman law in the laws of medieval kingdoms and the evolving European nations,⁵⁶ although none appear to trace those continental codes directly to England. Moreover, legal scholars and theorists continued to write about Roman law concepts of *res communes omnium* and *res publicae* throughout the medieval period and through the seventeenth century work of Grotius,⁵⁷ a leading natural law theorist of the Enlightenment.⁵⁸ Details of continental trust law varied, just as the doctrine varies from state to state in the United States.⁵⁹ The underlying concept however, was consistent: recognition that some portions of the earth should remain in common.

2. Medieval English Law

It is possible that William the Conqueror imported public trust law to England in 1066 as part of continental feudal law, which borrowed from Roman law.⁶⁰ Some scholars have identified a contemporaneous (eleventh century) French statute purporting to guarantee open access to “public highways and byways, running water and springs, meadows, pastures, forest, heaths and rocks...”⁶¹ Eleventh century Normandy was not yet part of France, however,⁶² and although it is clear that William and his successors brought elements of continental feudal law to England,⁶³ evidence that he imported this particular French statute would require considerably more detailed historical digging.

Moreover, the practice of William and his successors was inconsistent with the idea of the public trust. One violation of English liberty redressed in Magna Carta was the practice of Norman monarchs in England to grant exclusive franchises in

⁵⁴ See Arnold, 6 N.J.L. at 50.

⁵⁵ See RUSSELL, *supra* note 44, at 302 (preservation of the Roman tradition in Italy, particularly among the lawyers), 369 (preservation of Roman law by Gothic kings), 429-31 (reliance on Roman law by Holy Roman Emperors in twelfth century), 445 (promulgation of legal code derived from Roman law by Emperor Frederick II in thirteenth century).

⁵⁶ See, e.g., Wilkinson, *supra* note 25, at 429 (Spain and France); Lazarus, *supra* note 25, at 33-34 (Spanish legal codes and others); MacGrady, *supra* note 25, at 535-45 (Visigoth code, Spanish code, French law and codes).

⁵⁷ See Ruhl and McGinn, *supra* note 19, at 30-33.

⁵⁸ See Prior Appropriation, *supra* note 1, at 757 & n.83.

⁵⁹ See *supra* notes 38-39 and accompanying text.

⁶⁰ See *supra* note 55.

⁶¹ See Wilkinson, *supra* note 25, at n.22.

⁶² See SIR MAURICE POWICK, THE LOSS OF NORMANDY 1189-1204, STUDIES IN THE HISTORY OF THE ANGEVIN EMPIRE 8 (2nd ed. 1960) (first published 1913).

⁶³ See Ralph V. Turner, *The Making of Magna Carta: The Historical Background*, in MAGNA CARTA AND THE RULE OF LAW 17-20 (Daniel Barstow Magraw, Andrea Martinez, & Roy E. Brownell II, eds. 2014) (describing abuses in England by Angevin kings).

navigable waters and fisheries to favored lesser nobility.⁶⁴ The same was true for forests in which English people formerly enjoyed free access.⁶⁵ Magna Carta forced King John to remove fish weirs that restricted public access to navigable rivers,⁶⁶ and to remove enclosures adjacent to rivers and forests.⁶⁷ This also prohibited the King from granting future exclusive grants.⁶⁸ Thus, William may have brought European feudal law to England, but the English barons forced a restoration of pre-existing rights, including rights analogous to the public trust doctrine. Of course, this effort was not fully democratic given that Runnymede was part of a conflict between King John and the English Barons, not between the nobility and the people.⁶⁹

The idea of an English public trust doctrine pre-dating the Norman conquest begs the question as to the origins of that doctrine, but it also could have derived from Roman law. The Romans ruled large portions of Britain beginning in the middle of the first century A.D.,⁷⁰ bringing core principles of Roman law that unified the Empire.⁷¹ That could not have not included the *Justinian Institutes*, which were written over a century after Rome withdrew from Britain.⁷² The Roman public trust doctrine, however, has roots that can be traced to as early as the second century,⁷³ well within the period of Roman rule. Moreover, classical Roman jurists developed the law regarding access to water bodies in response to exclusive claims by the owners of luxury villas,⁷⁴ and the wealthy in Britain emulated the Roman practice

⁶⁴ See Arnold, 6 N.J.L. at 3, 50-51.

⁶⁵ See Nicholas A. Robinson, *The Charter of the Forest: Evolving Human Rights in Nature*, in MAGNA CARTA AND THE RULE OF LAW, 311, 311-17 (Daniel Barstow Magraw, Andrea Martinez, & Roy E. Brownell II, eds. 2014).

⁶⁶ Magna Carta, §33, available at: <https://www.bl.uk/magna-carta/articles/magna-carta-english-translation#> (British Museum translation 2014).

⁶⁷ *Id.* §§47, 53.

⁶⁸ See *Appleby*, 271 U.S. at 382; *Martin*, 41 U.S. (16 Pet.) at 410.

⁶⁹ See Turner, *supra* note 63; Sandra Day O'Connor, *Foreword*, in MAGNA CARTA AND THE RULE OF LAW xi, xii-xiii (Daniel Barstow Magraw, Andrea Martinez, & Roy E. Brownell II, eds. 2014); WINSTON CHURCHILL, A HISTORY OF THE ENGLISH-SPEAKING PEOPLES, VOL. I, THE BIRTH OF BRITAIN xv-xi, 185-86 (1956, Bantam ed. 1963). Nevertheless, although Magna Carta sometimes addresses issues of feudal order and the rights of knights and other nobles, *e.g.*, Magna Carta, *supra* note 66, §§4, 21, the liberties spelled out in the charter are addressed to “all free men of our kingdom” and some of the rights are addressed to a “free man” or “any man” or anyone. *E.g.*, *id.* §§27, 28, 30, 39, 40. See O'Connor, *supra*, at xiii.

⁷⁰ The perception that Roman occupation began with Julius Caesar a century earlier is misleading. Julius Caesar mounted two armed incursions into Britain beginning in 55 B.C. to subdue troublesome tribes, but promptly left without leaving any significant aspects of Roman rule or civilization. See CHURCHILL, *supra* note 69, at 1-4, 10-12. The invasion that led to Roman colonization began a century later under Emperor Claudius, *see id.* at 13-14, and Roman rule continued until the end of the fourth century. *See id.* at 13-33.

⁷¹ *See id.* at 21, 26-28, 31.

⁷² See Ruhl & McGinn, *supra* note 19, at 5; CHURCHILL, *supra* note 69, at 31-41.

⁷³ See Ruhl & McGinn, *supra* note 19, at 47-49; Frier, *supra* note 19, at 642.

⁷⁴ See Ruhl & McGinn, *supra* note 19, at 50-51.

of building luxury villas.⁷⁵ Thus, although documentation of the extent to which Roman law influenced early English common law is sparse,⁷⁶ and although England freed itself from rigid adherence to Roman civil law relative to Continental Europe,⁷⁷ the pre-Norman English public trust may have roots in Roman law.

On the other hand, the public trust doctrine might have evolved independently in England as part of the common law, based on similar principles that certain lands and natural resources are shared and not amenable to private ownership. Some scholars hypothesize that Lord Matthew Hale's late eighteenth century treatise on maritime law⁷⁸ was the first real manifestation of the English public trust doctrine.⁷⁹ Others trace the English common law roots to Henry de Bracton's seminal thirteenth century compilation of English common law.⁸⁰ Yet Bracton did not write on a clean slate any more than did the authors of the *Institutes of Justinian*. His was the first effort to compile the case law produced by early English jurists into a set of general "common law" principles.⁸¹ The Celtic tribes and others that inhabited Britain before the Romans arrived and after they left showed a strong history of individual liberty, without a highly structured central government, and a strong subsistence reliance on

⁷⁵ See CHURCHILL, *supra* note 69, at 29.

⁷⁶ Churchill aptly described the uncertain evolution of English law as "a body of custom which, whatever its ultimate sources may be—folkright brought from beyond the seas by Danes, and by Saxons before them, maxims of civil jurisprudence culled from Roman codes—is being welded into one Common Law." CHURCHILL, *supra* note 69, at x-xi. Yet he also noted that English common law diverged in significant ways from the civil law codes influenced by Rome. See *id.* at 163-65. Professor Thomas Lund expressed significant uncertainty about the degree of influence Roman law had on English common law, See THOMAS LUND, THE CREATION OF THE COMMON LAW: THE MEDIEVAL YEAR BOOKS DECIPHERED 1-3, 45 (2015), but noted its declining influence when the clerics abandoned judicial posts because of their reluctance to swear a preference for secular rather than ecclesiastical doctrine. *Id.* at 23-34. See also *id.* at 350-51 (noting differences between codified law according to Roman methods and case law according to the English common law method). But see, *id.* at 223 (documenting influence of Roman doctrine of *res judicata*). See also John H. Langbein, Bifurcation and the Bench: The Influence of the Jury on English Conceptions of the Judiciary, in JUDGES AND JUDGING IN THE HISTORY OF THE COMMON LAW AND CIVIL LAW FROM ANTIQUITY TO MODERN TIMES 69, 72 (Paul Brand & Joshua Getzler) 2012 (explaining a movement known as "Reception of Roman Law" which took place in Northern Europe but did not take place in England).

⁷⁷ See CHURCHILL, *supra* note 69, at xviii.

⁷⁸ LORD MATTHEW HALE, A TREATISE RELATIVE TO THE MARITIME LAW OF ENGLAND (1787).

⁷⁹ See Cohen, *supra* note 28, at 251 (arguing that the doctrine only took hold in England in late eighteenth century based on Hale's treatise); MacGrady, *supra* note 25, at 7 (arguing that the *prima facie* rule of sovereign ownership was not adopted in England until 1795, by which time most of the English shoreline was in private ownership).

⁸⁰ See Huffman, *supra* note 25, at 545; Lazarus, *supra* note 25, at 635. The reference is to Henry de Bracton's *On the Laws and Customs of England*. See LUND, *supra* note 76, at 2.

⁸¹ See LUND, *supra* note 76, at 2.

common resources.⁸² Professor Nicholas Robinson demonstrates that, in creating Royal Forests, the Norman kings displaced “the customary access of many, including commoners, to forest areas.”⁸³

Thus, the English public trust doctrine may reflect Roman law during the Roman occupation, Continental law imported by the Normans, centuries of customary access to common resources in England, or a combination of the above. Regardless of the sources, English common law embraces a principle, which as explained later is consistent with natural law theory,⁸⁴ that some portions of the earth are best made available for private ownership, while others are more efficiently or equitably left in common.

3. *Implications for American public trust law*

Regardless of the exact status and accuracy of the Justinian compilations or a more detailed evaluation of the Roman public trust concept, or of the derivation of the analogous doctrine in English common law, the details are not necessarily critical to analysis of the American doctrine and its future.⁸⁵ The basic idea is that some portions of the earth are amenable to private ownership, while other areas (the air, running water, the sea, and the seashore, as well as forest and other common resources) should remain as some form of public commons, or in some form of public ownership. As one U.S. court noted recently, “Justinian derived the doctrine from the principle that the public possesses inviolable rights to certain natural resources.”⁸⁶ During the period in which American public trust law first developed, American jurists were accustomed to drawing on multiple sources of authority to identify the “best” or “true” doctrines that should apply to a particular issue.⁸⁷ The following sections evaluate the extent to which public trust principles reflect common law, constitutional law, and natural law.

C. The Public Trust Doctrine as Common Law

Scholars continue to debate the legal sources and origins of the American public trust doctrine.⁸⁸ The lion’s share of judicial authority, however, suggests that it derived most directly from English common law,⁸⁹ and was inherited first by the

⁸² See CHURCHILL, *supra* note 69, at 7-10, 19 (noting “the primary right of men to die and kill for the land they lived in”), 22 (noting the rebellion of “a vast host of broken, hunted men resolved on death or freedom”), 24.

⁸³ See Robinson, *supra* note 65, at 317.

⁸⁴ See *infra* Part II.E.3.

⁸⁵ See Ruhl & McGinn, *supra* note 19, at 61.

⁸⁶ *Lawrence*, 254 P.3d at 608.

⁸⁷ See *Prior Appropriation*, *supra* note 1, at 770-73.

⁸⁸ See *supra* note 25.

⁸⁹ See *PPL Montana*, 565 U.S. at 603-04 (although also noting roots in Roman civil law); *Packer*, 137 U.S. at 667-68; *Pollard’s Lessee v. Hagan*, 44 U.S. (3 How.) 212, 228-29 (1845); *Lawrence*, 254 P.3d at 609; *Ariz. Center for Law in the Public Interest*, 837 P.2d at

British colonies and later by the states that succeeded them,⁹⁰ or by later-admitted states under the Equal Footing Doctrine.⁹¹ The Nevada Supreme Court, for example, noted recently that, although the public trust doctrine was “thought to be” traceable to Roman law, it was clearly “adopted by the common law courts of England”⁹² Likewise, the U.S. Supreme Court indicated that “its principles can be found in the English common law”⁹³

Rooting the public trust doctrine in English common law, however, does not resolve disagreements regarding the nature and breadth of that authority. Some scholars argue that, even if the public trust doctrine is a correct statement of English common law adopted in and modified in American law,⁹⁴ it simply confirms government title to a narrow category of lands beneath navigable waters.⁹⁵ As such, the doctrine is not appropriately expanded to other resources and functions. Other scholars suggest that submerged land is simply one example of a broader principle, and that courts can modify the doctrine to suit new circumstances and to protect other common resources.⁹⁶

A related disagreement is the degree to which the government holds title to lands underlying navigable waters, or other resources, subject to trust limitation. Some argue that the government holds those resources like other public property, and can dispose of them subject to applicable positive law.⁹⁷ Indeed, those scholars question whether principles of trust law even apply to public resources, despite the longstanding use of that terminology.⁹⁸ At the other extreme is the idea that public trust resources, by their very nature, are unalienable.⁹⁹ In the middle is a body of

161; *Nat'l Audubon Society*, 685 P.2d at 718 (although also noting roots in Roman civil law); *Kootenai Env'tl. Alliance*, 671 P.2d at 1088 (on rehearing); *Gough v. Bell*, 22 N.J.L. 441, 454-55 (1850); *Carson*, 2 Binn. At 477-78, 484.

⁹⁰ See *Shively v. Bowlby*, 152 U.S. 1, 14-18 (1894); *Illinois Ctr'l. R. Co. v. Illinois*, 146 U.S. 387, 456 (1892); *Pollard's Lessee*, 44 U.S. at 409-10; *Arnold v. Mundy*, 6 N.J.L. 1, 49-53 (1821).

⁹¹ See *Shively*, 152 U.S. at 26-28; *Pollard's Lessee*, 44 U.S. at 222-23.

⁹² *Lawrence*, 254 P.3d at 609; see also *Arizona Center for Law in the Public Interest*, 837 P.2d at 161 (doctrine “originates in a common-law doctrine, dating back at least as far as Magna Charta”); *Kootenai Env'tl. Alliance*, 671 P.2d at 1088 (describing doctrine as “one of the dominant principles of the English common law.”).

⁹³ *PPL Montana*, 565 U.S. at 604.

⁹⁴ Not all scholars agree, arguing that American courts misinterpreted and misapplied the English doctrine. See James L. Huffman, *Why Liberating the Public Trust Doctrine is Bad for the Public*, 45 ENVTL. L. 337, 339-49 (2015).

⁹⁵ See *Lazarus*, *supra* note 25, at 691; *Huffman*, *supra* note 25, at 527, 541, 561.

⁹⁶ See *Babcock*, *supra* note 30; *Sax*, *supra* note 26; *Epstein*, *supra* note 25.

⁹⁷ See *Huffman*, *supra* note 94, at 368-69; *Cohen*, *supra* note 28, at 274-76.

⁹⁸ See *Huffman*, *supra* note 25, at 534-41; *Lazarus*, *supra* note 25, at 656-68.

⁹⁹ See *Torres & Bellinger*, *supra* note 18, at 284-87.

authority defining or limiting the reasons for which public trust resources can be privatized,¹⁰⁰ by whom,¹⁰¹ to what extent,¹⁰² and with what qualifications.¹⁰³

If these are purely issues of common law, they can be changed through the positive law of any jurisdiction. First, *stare decisis* does not prohibit judges from modifying or even abandoning previous common law doctrines where they no longer make sense or where they are inconsistent with conditions in a particular jurisdiction.¹⁰⁴ Indeed, American courts have expressly modified English common law regarding the public trust doctrine when they found particular aspects of that law inapplicable or unsuited to the conditions in North America.¹⁰⁵ Second, as the

¹⁰⁰ See *Appleby*, 271 U.S. at 383-84 (authorizing grants for adequate compensation and pursuant to plan of harbor improvement in the public interest); *Illinois Central*, 146 U.S. at 453 (allowing grants if “used in promoting the interests of the public” or “for the improvement of the navigation and use of the waters”); *In re Trempealeau Drainage Dist.*, 131 N.W. 838, 840-41 (1911) (authorizing draining of wetlands to improve navigation); *Ward v. Mumford*, 32 Cal. 365, 372-73 (1867) (authorizing grants to improve navigation as consistent with the trust); *Eldridge v. Cowell*, 4 Cal. 80, 87 (1854) (authorizing plan for filling lots in San Francisco Bay “to subserve the public good”); *Gough v. Bell*, 22 N.J.L. at 458-59 (authorizing grants for public purposes), 466-68 (noting grants for dams, docks, and other improvements).

¹⁰¹ See *Appleby*, 271 U.S. at 382 (authorizing legislative grants); *Illinois Central*, 146 U.S. at 460 (by the legislature, with reservation of the power of future legislatures to change); *Gough*, 22 N.J.L. at 456-58 (authorizing valid grants by legislature acting as representatives of the people as sovereign).

¹⁰² See *Shively*, 152 U.S. at 48-50 (restricting federal grants of submerged lands held in trust for states to cases of “some international duty or public exigency”); *Illinois Central*, 146 U.S. at 451-58 (limiting to discrete parcels but prohibiting for entire public harbor); *Gough*, 22 N.J.L. at 459 (not permissible for “all the waters of the state”).

¹⁰³ See *Chandler-Dunbar Co.*, 229 U.S. at 62 (qualifying private title to submerged lands as “subordinate to the public right of navigation” and “the absolute power of Congress over the improvement of navigable rivers”); *Illinois Central*, 146 U.S. at 457-58 (only with “an implied reservation of the public right”); *Martin*, 41 U.S. at 411 (requiring that grants from the trust must be strictly construed); *Cleveland & Pittsburgh R.R. Co.*, 94 Ohio St. at 69 (any state title subject to federal government’s paramount rights of navigability); *People v. California Fish Co.*, 166 Cal. 576, 589 (1913) (holding that owners took title subject to easement servitude for navigation and commerce); *Taylor v. Underhill*, 40 Cal. 471, 473 (1871) (prohibiting sales that would materially interfere with navigation).

¹⁰⁴ See, e.g., Michael Gentithes, *Precedent, Humility, and Justice*, 18 TEX. WESLEYAN L. REV. 835, 872 (2012) (explaining that precedent sets the groundwork for common law but must be refined through subsequent decisions); Wilkinson, *supra* note 25, at 467-69 (explaining applicability of common law flexibility to public trust law).

¹⁰⁵ See, e.g., *Shively*, 152 U.S. at 11-26 (surveying ways in which English common law trust rule had been modified in U.S. states); *Bay Head Improvement Ass’n*, 471 A.2d at 365-66 (expanding public trust protection to dry beaches recognizing modern uses and “the dynamic nature of the public trust doctrine”); *Nat’l Audubon Soc.*, 688 P.2 at 719-22 (recognizing earlier changes in geographic scope of navigable waters, and expanding protection to address water diversions from non-navigable tributaries to navigable waters); *Marks*, 491 P.2d at 380 (expanding trust purposes to include ecological, aesthetic, and scientific uses and values); *Elder v. Burrus*, 25 Tenn. 358, 365-67 (1845) (holding English

elected representatives of the people, legislatures have the authority to modify or override even longstanding common law doctrines.¹⁰⁶

Yet although states have discretion regarding the scope and applicability of the public trust doctrine,¹⁰⁷ no state has successfully¹⁰⁸ eliminated it. Moreover, the U.S. Supreme Court and state courts suggest that such an effort would be impermissible.¹⁰⁹ No court, however, has articulated a universal baseline for protection of public trust resources. Moreover, if such a baseline exists, it cannot be justified on common law grounds alone. Rather it must be grounded either in a binding principle of constitutional law; or in a fundamental principle of law that is rooted so deeply in our legal tradition or our concept of natural rights and liberties that it is immutable. Those possibilities are explored in the following subsections.

D. The Public Trust Doctrine as Constitutional Law

The Supreme Court has held that certain aspects of the public trust doctrine are governed or influenced by the U.S. Constitution. It is important, however, to distinguish the specific public trust issues to the Constitution applies from those aspects of the doctrine governed by common law.

1. Allocation of Trust Authority

In *Martin v. Waddell*¹¹⁰ and in *Pollard's Lessee v. Hagan*,¹¹¹ the Supreme Court clarified that states, not the federal government, hold title to lands underlying navigable waters. Just as the British Crown as sovereign held title beneath navigable waters in trust for the British people, the Colonies held that trust on behalf of the settlers; and after the Revolution, the people of each state became sovereign and held that trust through their duly elected governments.¹¹² Later-admitted states enjoy the same rights on an "equal footing" with the original states.¹¹³

rule on geographic scope of navigability not suited to conditions in Tennessee); *Wilson v. Forbes*, 13 N.C. 30 (1828) (holding English tidal rule inapplicable to circumstances in North Carolina); *Palmer v. Mulligan*, 3 Cai. 307, 318 (N.Y. Sup. Ct. 1826) (finding English rule regarding ebb and flow of tide unsuitable to Hudson River).

¹⁰⁶ See *United States v. Texas*, 507 U.S. 529, 534 (1993) (indicating a presumption for retaining longstanding common law unless a statute overrides plainly and directly).

¹⁰⁷ See *supra* notes 38-39 and accompanying text.

¹⁰⁸ See *supra* note 40 (describing unsuccessful attempt by Arizona legislature to relinquish state public trust claims to majority of the state's navigable waters).

¹⁰⁹ See, e.g., *Appleby*, 271 U.S. at 393; *Ill. Central R.R. Co.*, 146 U.S. at 451-55; *California Fish Co.*, 166 Cal. at 591; *Arnold*, 6 N.J.L. at 49-53.

¹¹⁰ 41 U.S. (16 Pet.) 367 (1842).

¹¹¹ 44 U.S. (3 How.) 212 (1845).

¹¹² *Martin*, 41 U.S. at 409-16.

¹¹³ *Pollard's Lessee*, 44 U.S. at 221-22. The "equal footing" doctrine with respect to state ownership and control of navigable waters was one application of a general principle, adopted by Congress in early state Acts of Admission, that new states should be admitted with the "same rights of freedom, sovereignty, and independence" as existing states. See *id.*

In cases delineating the federal navigational servitude,¹¹⁴ however, the Supreme Court interpreted the Commerce Clause of the Constitution¹¹⁵ as a cession by the states of that portion of sovereignty necessary to empower the federal government to protect navigable waters for interstate and international commerce.¹¹⁶ To the extent that the public trust doctrine protects the common use and preservation of navigable waters for public uses such as navigation, fishing, and commerce, the federal navigation servitude divides that trust authority and responsibility between the state and federal governments.¹¹⁷ When the Supreme Court has addressed conditions under which states may alienate trust property, it has underscored that any such dispositions remain subject to the federal navigation servitude.¹¹⁸

Navigable waters are not the only area in which the states ceded some control over public trust resources to the federal government pursuant to the Commerce Clause and other constitutional authority. For example, states retain police power authority to manage and protect wildlife within their territory even though the Supreme Court rejected the doctrine of state “ownership” of wildlife.¹¹⁹ With respect to wildlife such as interstate and international migratory birds¹²⁰ and threatened and

at 221. Although the “equal footing” language appears nowhere in no constitutional text, it implements the State Admission Clause. U.S. CONST., art. IV, §3, cl. 1.

¹¹⁴ See generally Robert W. Adler, *The Ancient Mariner of Constitutional Law: The Historical, Yet Declining Role of Navigability*, 90 WASH. U. L. REV. 1643, 1676-82 (2013) (surveying cases).

¹¹⁵ U.S. CONST. art. I §8 c.3.

¹¹⁶ See *PPL Montana*, 565 U.S. at 591 (states gained title to lands beneath navigable waters “subject only to the ‘paramount power of the United States to control such waters for purposes of navigation in interstate and foreign commerce.’”); see also *United States v. Grand River Dam Auth.*, 363 U.S. 229, 231 (1960); *United States v. Twin Cities Power Co.*, 350 U.S. 222, 224 (1956); *Chandler-Dunbar Co.*, 229 U.S. at 62-63. This doctrine had antecedents in Supreme Court jurisprudence establishing plenary federal Commerce Clause authority over navigable waters. See *Monongahela Navigation Co. v. United States*, 148 U.S. 312 (1893); *South Carolina v. Georgia*, 93 U.S. (3 Otto) 4 (1876); *Gilman v. City of Philadelphia*, 70 U.S. (3 Wall.) 713 (1865); *Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1 (1824).

¹¹⁷ See *Chandler-Dunbar Co.*, 229 U.S. at 63 (“Congress possesses all the powers [over navigable waters] which existed in the states before adoption of the national Constitution, and which have always existed in the Parliament in England.”).

¹¹⁸ See *Chandler-Dunbar Co.*, 229 U.S. at 60-62 (holding that, when state law confers technical title to beds of navigable waters to adjacent landowners, title remains subject to the federal servitude); *Shively*, 152 U.S. at 14-18 (holding that title to discrete parcels states grant to private parties remains subject to those rights the states surrendered to federal government). *Accord, Ill. Central R.R. Co.*, 146 U.S. at 465 (Shiras, J., dissenting).

¹¹⁹ *Hughes v. Oklahoma*, 441 U.S. 322, 329-36 (1979) (rejecting state effort to restrict interstate trade in wildlife as Commerce Clause violation but confirming the state’s police power authority over wildlife). Earlier, the Supreme Court had upheld state efforts to restrict interstate wildlife exports as sovereigns who hold wildlife in trust for their people. *Geer v. Connecticut*, 161 U.S. 519, 529-30 (1896).

¹²⁰ See *Missouri v. Holland*, 252 U.S. 416, 430-35 (1920) (upholding Migratory Bird Treaty Act pursuant to federal power to enter into and enforce treaties with foreign nations).

endangered species,¹²¹ however, the states ceded to the federal government some level of trust responsibility and authority as well. Arguably, the same is true for protection of atmospheric resources. Although states have authority and responsibility as *parens patriae* to protect common resources from air pollution,¹²² the Clean Air Act¹²³ reflects the federal government's authority to redress interstate pollution and pollution that otherwise affects interstate commerce.¹²⁴

In addition, where the federal government held lands in territorial status prior to the creation of new states, despite its "plenary authority" over public lands¹²⁵ under the Property Clause,¹²⁶ it held lands underlying navigable waters in trust for future states.¹²⁷ This preserved the rights of future states to be admitted on an equal footing with the original states and all other previously admitted states. Thus, under multiple provisions of the Constitution, the federal government held pre-statehood sovereign lands subject to two distinct, but related, trusts. First, it held those lands in trust for the future states themselves. Consistent with that trust, any alleged conveyances of sovereign lands to other parties were subject to strict judicial scrutiny and a presumption against such conveyances absent clear indications to the contrary.¹²⁸ Second, until those states were admitted, the federal government that held those lands as sovereign, bound itself by the traditional public trust doctrine.¹²⁹

2. Substance of the Public Trust Doctrine

None of the above principles of constitutional law dictate or authorize the federal government to dictate the substance of the public trust doctrine. There are three ways, however, in which federal constitutional provisions potentially implicate the substance of the public trust doctrine.

First, although the Commerce Clause is the constitutional vehicle through which the states conceded part of their public trust authority and responsibility to the federal government,¹³⁰ it also grants substantive authority to Congress.¹³¹

¹²¹ See, e.g., *Gibbs v. Babbitt*, 214 F.3d 483 (4th Cir. 2000), cert. denied, 531 U.S. 1134 (upholding applicability of Endangered Species Act to intrastate population of red wolves based on tourism and other interstate impacts).

¹²² See *Georgia v. Tennessee Copper Co.*, 206 U.S. 230 (1907) (affirming state power to redress interstate air pollution to protect the shared resources of its citizenry, including air, forests, and agricultural resources).

¹²³ 42 U.S.C. §7401 et seq.

¹²⁴ See *Connecticut v. E.P.A.*, 696 F.2d 147, 156 (2d Cir. 1982)).

¹²⁵ See *Kleppe v. New Mexico*, 426 U.S. 529, 539-40 (1976); *Prior Appropriation*, *supra* note 1, at 750.

¹²⁶ U.S. CONST. art IV, §3, cl.2.

¹²⁷ See *Shively*, 152 U.S. at 28-31; *Knight v. U.S. Land Ass'n*, 142 U.S. 161, 183-84 (1891); *Pollard's Lessee*, 44 U.S. at 222-23.

¹²⁸ See *Idaho v. United States*, 533 U.S. 262, 272-73 (2001).

¹²⁹ See *Shively*, 152 U.S. at 48-50.

¹³⁰ See *supra* notes 114-116 and accompanying text.

¹³¹ U.S. CONST. art. I, §8, cl. 3 (empowering Congress to "regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes.").

Nothing in the text of the Commerce Clause, however, expressly invokes the public trust doctrine, much less instructs Congress about how to exercise such authority. This is logical given that the cession of public trust authority is simply one of many areas in which the states, in adopting the Commerce Clause, ceded authority over interstate and international commerce. Moreover, the Commerce Clause provides no additional substantive guidance regarding the many other spheres in which it authorizes Congress to regulate interstate and foreign commerce. At a minimum, however, it limits the scope of federal authority to enforce the public trust doctrine to those issues that fall within the reach of Commerce Clause power.

Second, by making state alienation of public trust resources subject to residual federal authority under the Commerce Clause and the federal navigational servitude, the U.S. Constitution becomes one way to impose a floor on the public trust doctrine. The Commerce Clause and the federal navigational servitude ensure that public trust protection of common public resources—at least those affecting interstate and foreign commerce—depends on application of public trust principles by both the states and the federal government. Thus, it provides a second line of defense with respect to those public trust resources involving interstate and foreign commerce.

The Property Clause of the Constitution also potentially influences the federal government's administration or supervision of sovereign public trust resources.¹³² For two seemingly opposite but ultimately consistent reasons, however, the Property Clause lacks any substantive standards governing the use and management of public trust resources. With respect to public lands generally, the Property Clause grants Congress "plenary authority," that is, unfettered discretion to determine how that property best serves the public interest, including the grant or sale of those lands to others.¹³³ If public trust resources are viewed as part of the nation's property just like any other, Congress would have discretion to alienate that property. Congress could abandon public trust resources entirely, a result the Supreme Court did not sanction with respect to state public trust resources in *Illinois Central* and other cases.¹³⁴ The Property Clause as interpreted generally, therefore, appears to provide no substantive constraints on the federal government's disposition of trust resources.

Just as states hold sovereign lands in a different capacity from other public property, however, the federal government exercises Commerce Clause and navigational servitude authority in a manner distinct from its management of public lands generally. With respect to pre-statehood sovereign lands, the Equal Footing doctrine obligated the federal government to manage public trust resources in the same capacity as any future state, and to preserve them in trust for future states.¹³⁵ With respect to sovereign lands held by states, the Commerce Clause and the federal navigational servitude confer residual authority to protect and manage those

¹³² U.S. CONST. art. IV, sec. 3, cl. 2 ("The Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States; and nothing in this Constitution shall be so construed as to Prejudice and Claims of the United States, or of any particular State.").

¹³³ See *supra* note 132.

¹³⁴ See *supra* notes 35-36 and accompanying text.

¹³⁵ See *supra* notes 127-129 and accompanying text.

resources for the traditional public trust uses of commerce and navigation.¹³⁶ Neither the Equal Footing Clause nor the Commerce Clause, however, delineate substantive principles regarding the exercise of the trust.

Thus, one must look elsewhere to find substantive rules or constraints on state and federal use, protection, and disposition of public trust resources. The third potential constitutional vehicle for doing so is the Ninth Amendment.¹³⁷ Debate continues, however, regarding the extent to which the Ninth Amendment is an independent source of unenumerated rights, and if so, the appropriate source of those rights.¹³⁸ I assumed a positive answer to that question in analyzing natural law support for prior appropriation, and do so here as well. If the legal rules governing the public trust doctrine are simply a matter of state and federal common law, they can be changed via common law process or by statute. Unless the government's duty as sovereign to maintain and protect those resources protects fundamental rights rooted so deeply in our legal tradition that they are viewed as inalienable, and thus "retained by the people." That possibility is explored next.

E. The Public Trust Doctrine as Natural Law

Courts have used language sounding in natural law to support the public trust doctrine, either expressly or by implication. That was true most often at times when natural law was most prominent in U.S. jurisprudence,¹³⁹ but recent judicial decisions have also invoked natural law to support public trust principles.¹⁴⁰ Particularly in the early nineteenth century, however, U.S. judges cited natural law to bolster decisions also based on common law, statutes, or constitutions.¹⁴¹

Other legal scholars have also addressed the relevance of natural law to the public trust doctrine, although from different perspectives than I present below. Some reach conclusions similar to mine, but others are considerably different.¹⁴² In an early treatment of the issue based on libertarian theory, Richard Epstein adopts a consequentialist view¹⁴³ in which he asks what set of rules best promote and correct

¹³⁶ See *supra* notes 114-118 and accompanying text.

¹³⁷ U.S. Const. amend. IX ("The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.").

¹³⁸ See *Prior Appropriation*, *supra* note 1, at 777-78.

¹³⁹ See, e.g., *Arnold*, 6 N.J.L. at 49-50 (1821); and see *Prior Appropriation*, *supra* note 1, at 771-74 (identifying when natural law was most predominant in U.S. jurisprudence).

¹⁴⁰ See, e.g., *Robinson Twp. v. Commonwealth of Pennsylvania*, 83 A.2d 901, 947-48 (Pa. 2013). Other recent judicial opinions courts have invoked natural law indirectly by citing the *Institutes of Justinian* quoted above. See, e.g., *Lawrence*, 254 P.3d at 608; *National Audubon Soc.*, 658 P.2d at 718.

¹⁴¹ See *Prior Appropriation*, *supra* note 1, at 772 & n.180.

¹⁴² I exclude from this list the very useful survey conducted by Blumm and Guthrie of public trust doctrines in other nations, some of which rely on natural law, because that analysis identified natural law sources but did not propose a theoretical framework based on those examples. See Blumm & Guthrie, *supra* note 18.

¹⁴³ Epstein, *supra* note 25, at 412 n.1 ("what general set of legal institutions will advance the welfare of the public at large").

voluntary transactions, and what role government should play in protecting common property from government intrusion.¹⁴⁴ He ultimately adopts the view that any property held in common in the “original position” that pre-dated civil society warrants public trust protection.¹⁴⁵ George Smith and Michael Sweeney reach a nearly opposite conclusion, arguing for a much more restrictive application of the public trust doctrine,¹⁴⁶ based on a significantly theistic view of natural law that has no place in American law.¹⁴⁷ Gerald Torres and Nathan Bellinger argue that the public trust reflect pre-existing or inherent rights that are “merely secured by government” and hence are “the chalkboard on which the Constitution is written.”¹⁴⁸

As argued in *Prior Appropriation*, in a society governed by positive law, natural law alone cannot support a consequential legal doctrine, particularly where duly enacted positive law provides otherwise.¹⁴⁹ To that extent, I agree with Professor Huffman that unbounded reliance on vague principles of natural law to disrupt settled legal expectations is inconsistent with democracy.¹⁵⁰ Individuals and governments are bound to obey positive law even if it conflicts with their views about what is just, under principles of natural law or otherwise. That is particularly true in the United States with respect to theistic sources of natural law, given constitutionally mandated separation of church and state,¹⁵¹ absent a parallel in secular law.¹⁵² That limitation, however, does not make natural law reasoning irrelevant to the history and evolution of the public trust doctrine, particularly when properly bounded by checks and balances and other institutional constraints.¹⁵³

1. *Natural Law in American Public Trust Jurisprudence*

Natural law principles can inform or support a legal doctrine adopted via positive law. They can guide judicial analysis of common law issues of first impression.¹⁵⁴ They can influence judicial exercise of equitable doctrines by shedding light on what is just from an historical perspective.¹⁵⁵ They can serve as a benchmark to determine whether a statute offends fundamental rights protected by

¹⁴⁴ See *id.* at 413-14.

¹⁴⁵ See *id.* at 428.

¹⁴⁶ See Smith & Sweeney, *supra* note 18.

¹⁴⁷ See *supra* note 6 and accompanying text.

¹⁴⁸ See Torres & Bellinger, *supra* note 18, at 288.

¹⁴⁹ See *Prior Appropriation*, *supra* note 1, at 779.

¹⁵⁰ See Huffman, *supra* note 25.

¹⁵¹ U.S. CONST. amend. 1.

¹⁵² See *Prior Appropriation*, *supra* note 1, at 779-80. For example, the Biblical Commandment that there is only one God is purely religious, whereas the prohibition against murder is a universally recognized principle of law. See *id.* at n.66 and accompanying text.

¹⁵³ See *infra* Part III.B.

¹⁵⁴ See *Prior Appropriation*, *supra* note 1, at 771-72.

¹⁵⁵ See *id.* at 772-73.

the Ninth Amendment, although the debate continues about the precise standards that apply, and the appropriate sources of those standards.¹⁵⁶

Early American courts cited natural law to bolster analysis of the English public trust doctrine. Most notably, Chief Justice Kirkpatrick relied heavily on natural law in his opinion in *Arnold v. Mundy*,¹⁵⁷ arguably the most influential early state court public trust decision.¹⁵⁸ In analyzing the grant from King Charles II to the Duke of York establishing the East Jersey settlement, Justice Kirkpatrick wrote:

If we shall find some things contained in it, which by the laws of England, as well as of all other civilized countries, and even by the very law of nature itself, are declared to be the common property of all men, then, by every fair rule of construction, we are to consider these things as granted to him, as the representative of the sovereign, and as a trustee to support the title for the common use¹⁵⁹

Moreover, Justice Kirkpatrick relied heavily on natural law in articulating what may be the most frequently quoted portion of his holding, and elsewhere in his opinion:

The sovereign power itself, therefore, cannot, consistently with the principles of the law of nature and the constitution of a well ordered society, make a direct and absolute grant of the waters of the state, divesting all citizens of their common right. It would be a grievance which could never be long borne by a free people.¹⁶⁰

Consistent with the practice of the time to cite natural law as part of a multi-faceted analysis,¹⁶¹ Chief Justice Kirkpatrick relied on natural law along with other sources (both civil law and common law) to justify his holding.¹⁶²

¹⁵⁶ See *id.* at 777-78.

¹⁵⁷ 6 N.J.L. 1 (1821).

¹⁵⁸ Courts often cite *Illinois Central* as the seminal or “lodestar” case in U.S. public trust jurisprudence, see, e.g., *Kootenai Envt’l Alliance*, 671 P.2d at 1088-89; *Nat’l Audubon Soc.*, 658 P.2d at 718, although one U.S. Supreme Court decision confers that honor on *Shively v. Bowlby*. See *Phillips Petroleum Co.*, 484 U.S. at 473. *Arnold v. Mundy* predated all of the relevant U.S. Supreme Court cases, however, and the Supreme Court relied on Chief Justice Kirkpatrick’s reasoning as early as *Martin v. Waddell*, 41 U.S. at 43-44, and in both *Illinois Central*, 146 U.S. at 456, and in *Shively*, 152 U.S. at 14-18.

¹⁵⁹ 6 N.J.L. at 49 (italics added).

¹⁶⁰ *Id.* at 53 (italics added). See also *id.* at 49 (“Of [the kind of property common to all citizens] according to the writers upon the law of nature and of nations, and upon the civil law, are the air, the running water, the sea, the fish, and the wild beasts.”); 50 (property “destined for the common use and immediate enjoyment of every individual citizen, according to his necessity, being the immediate gift of nature to all men, and, therefore, called the common property”) (italics in original).

¹⁶¹ See *Prior Appropriation*, *supra* note 1, at 772.

¹⁶² 6 N.J.L. at 52 (“On the whole, therefore, I am of opinion, that by the law of nature, which is the only true foundation of all the social rights; that by the civil law, which formerly

Other early state courts relied on natural law to explain the public trust doctrine,¹⁶³ although not universally.¹⁶⁴ Some state courts rooted public trust principles in natural rights that formed a key part of Enlightenment political theory, even without using the term “natural law.”¹⁶⁵ Even in modifying the result in *Arnold v. Mundy* by clarifying that the state legislature had power to dispose of discrete trust resources where consistent with the purposes of the trust, the New Jersey Supreme Court continued to rely on natural law principles among other factors.¹⁶⁶

The U.S. Supreme Court also relied on natural law in its early public trust jurisprudence. For example, although Justice Thompson dissented from the result in *Martin v. Waddell*, he agreed with the basic natural law principle supporting the state trust doctrine, paraphrasing Chief Justice Kirkpatrick’s words:

The sovereign power itself, therefore, cannot consistently with the principles of the laws of nature, and the constitution of a well-ordered society, make a direct and absolute grant of the waters of the state, divesting all the citizens of a common right. It would be a grievance which could never be long borne by free men.¹⁶⁷

Likewise, in *Illinois Central*, Justice Field quoted with approval those portions of *Arnold v. Mundy* citing “the law of nature and the constitution of a well-ordered society.”¹⁶⁸ Other references to natural law in the Supreme Court’s nineteenth century public trust jurisdiction are more subtle, but nevertheless grounded in natural law reasoning.¹⁶⁹

governed almost all the civilized world, and which is still the foundation of the polity of almost every nation in Europe, that by the common law of England” navigable waters are common to all citizens).

¹⁶³ See, e.g., *Palmer*, 3 Cai. at 320 (referring to principles *ex jure naturae* [from natural law] as governing rights to divert streams).

¹⁶⁴ See *Carson*, 2 Binn. At 484-87 (extending state ownership to beds of waters navigable in fact rather than those influenced by the ebb and flow of the tides, modifying English common law to suit geography of Pennsylvania); *Eldridge*, 4 Cal. at 87 (rooting early California public trust law in “the law of nations, and the common and civil law”).

¹⁶⁵ See, e.g., *Commonwealth v. Alger*, 61 Mass. (7 Cash.) 53, 67-68, 70 (1851) (rooting public rights to navigable waters in Massachusetts in traditional English liberties as used in Magna Carta, the Declaration of Rights, and similar principles of English law).

¹⁶⁶ *Gough*, 22 N.J.L. at 456-57 (acknowledging that legislature is not omnipotent in exercising trust discretion because constrained by constitutional provisions and because its “powers are abridged by fundamental laws”); see also *id.* at 459 (quoting with approval statement in *Arnold* rejecting state’s ability to make absolute grants to all state waters “consistently with the laws of nature”).

¹⁶⁷ *Martin*, 421 U.S. at 420 (Thompson, J., dissenting).

¹⁶⁸ *Illinois Central R.R. Co.*, 146 U.S. at 456.

¹⁶⁹ See, e.g., *The Propeller Genesee Chief v. Fitzhugh*, 53 U.S. 443, 458 (1851) (applying congressional determination of navigability more generally because those distinctions “are founded in truth and reason”).

The Supreme Court most expressly relied on natural law, however, to support its holding that sovereigns have a trust responsibility to manage common wildlife resources for the benefit of the public at large.¹⁷⁰ Tracing the origins of the common ownership doctrine to Roman law, in which wild animals are designated as “*ferae naturae*, which, having no owner, were considered as belonging in common to all the citizens of the state,”¹⁷¹ Justice White wrote:

There are things which we acquire the dominion of, as by the law of nature, which the light of natural reason causes every man to see, and others we acquire by the civil law; that is to say, by methods belonging to the government. As the law of nature is more ancient, because it took birth with the human race it is proper to speak first of the latter. (1) Thus, all the animals which can be taken upon the earth, in the sea, or in the air,--that is to say, wild animals,--belong to those who take them ... because that which belongs to nobody is acquired by the natural law by the person who first possesses it.¹⁷²

Justice White explained why state regulation of wildlife was consistent with this natural law theory,¹⁷³ and how those principles were adopted as positive law both in European civil codes¹⁷⁴ and in English common law.¹⁷⁵ He concluded:

While the fundamental principles upon which the common property in game rest have undergone no change, the development of free institutions had led to the recognition of the fact that the power or control lodged in the state, resulting from this common ownership, is to be exercised, like all other powers of government, as a trust for the benefit of the people, or for the benefit of private individuals as distinguished from the public good.¹⁷⁶

In his dissent in *Geer*, Justice Field also rooted his decision in natural law regarding ownership of resources that are not the property of anyone “until they are brought into subjection or use by the labor or skill of man,” and “[t]hat which belongs to nobody is acquired by the natural law by the first person who possesses it.”¹⁷⁷ Justice Field’s dissent was not based on any disagreement with the fundamental principle that wildlife is a common resource held in trust by the government as sovereign until individual animals are reduced to private ownership.

¹⁷⁰ *Geer*, 161 U.S. 519 (1896).

¹⁷¹ *Id.* at 522.

¹⁷² *Id.* at 523 (italics added).

¹⁷³ *Id.* at 524.

¹⁷⁴ *Id.* at 526 (citing articles 714 and 715 of the Napoleonic Code).

¹⁷⁵ *Id.* at 526-27 (quoting Blackstone’s analysis of the natural law basis for a public trust in common resources such as light, air, water, and animals).

¹⁷⁶ *Id.* at 529.

¹⁷⁷ *Id.* at 539 (Field, J., dissenting).

Rather, he would have rejected as a Commerce Clause violation the position that a state could exercise the trust to the exclusion other states.¹⁷⁸ To support that constitutional position, however, he continued to rely on natural law, arguing that exclusionary state regulation “would convert [wildlife] from the freedom of use which belongs to property in general to the limited use of the persons or communities where found”¹⁷⁹ In other words, exclusive state trust ownership did more to restrict than to promote the common liberty supported by natural law.

Likewise, when the Supreme Court overruled the state “ownership” doctrine of *Geer* based on the same objections raised by Justice Field in his dissent,¹⁸⁰ it did nothing to reject the principle that wildlife is a shared resource that is incapable of “ownership”, either by an individual or by the state. Rather, it referred to state “ownership” as a legal fiction to justify the state’s legitimate interest in regulating and protecting wildlife for common benefit. As a matter of federalism, the constitutional treatment of wildlife under *Hughes* is no different than the Supreme Court’s treatment of navigable waters discussed earlier.¹⁸¹ States have responsibility to manage and protect wildlife as a shared resource for the benefit of their citizens, just as states have responsibility to do so with respect to navigable waters. But in ratifying the Constitution, states ceded that portion of their sovereignty regarding wildlife as necessary to empower the federal government to regulate and protect wildlife in interstate and foreign commerce.

The key difference between wildlife and navigable waters, which is immaterial to the basic concept of protecting the common resource rather than allowing it to be privatized, is in the positive law implementation of the natural law principle. With respect to stationary beds of navigable waters it makes sense to provide that the state as sovereign holds *jus publicum* title on behalf of the public at large, subject to the federal government’s superior authority to regulate navigability for Commerce Clause purposes. “Ownership” makes little sense with respect to a non-stationary resource such as wildlife,¹⁸² but public trust authority and responsibility remains.

Consistent with the decline in the use of natural law by American judges beginning in the twentieth century, and its replacement by legal positivism as the primary mode of legal analysis,¹⁸³ modern public trust cases have largely abandoned the overt natural law trappings that characterized earlier cases. In at least two respects, however, modern public trust jurisprudence retains its roots in natural law. First, modern cases continue to cite Roman law as foundational,¹⁸⁴ and that law refers to “the law of nature.”¹⁸⁵ Second, in referring to the doctrine as an “ancient

¹⁷⁸ *Id.* at 538, 541.

¹⁷⁹ *Id.* at 542.

¹⁸⁰ *Hughes*, 441 U.S. at 329-36 (citing Justice Field’s dissent in *Geer*).

¹⁸¹ *See supra* Part II.D.1.

¹⁸² *See also Missouri v. Holland*, 252 U.S. at 434 (“To put the claim of the State upon title is to lean upon a slender reed. Wild birds are not in the possession of anyone; and possession is the beginning of ownership.”).

¹⁸³ *See Prior Appropriation, supra* note 1, at 774-76.

¹⁸⁴ *See supra* note 140.

¹⁸⁵ J. Inst. 2.1.1

doctrine of common law,” courts implicitly recognize that early common law was influenced strongly by natural law.¹⁸⁶

Moreover, the Pennsylvania Supreme Court recently adopted natural law reasoning in construing the state’s constitutional environmental rights provision. In *Robinson Township v. Commonwealth*, the Court described the Declaration of Rights in Article I of Pennsylvania’s Constitution as “the terms of the social contract between government and the people that are of such ‘general, great and essential’ quality as to be ensconced as ‘inviolable.’”¹⁸⁷ It then described those as “inherent in man’s nature and preserved rather than created by the Pennsylvania Constitution.”¹⁸⁸ Despite the fact that the Pennsylvania Environmental Rights Amendment¹⁸⁹ was adopted long after the initial adoption of the Pennsylvania Constitution,¹⁹⁰ the Court deemed it as “[a]mong the inherent rights of the people.”¹⁹¹

By now, American public trust jurisprudence has developed a firm footing in the nation’s positive law, both through the common law¹⁹² and to some extent through the Commerce Clause and other provisions of the U.S. Constitution.¹⁹³ As shown above, however, it also has roots in natural law reasoning. Analysis of those natural law roots remains important in deciding two important legal issues: first, whether states have the authority to eliminate the doctrine or to curtail it substantially; and second, the extent to which the that doctrine is limited to the beds of navigable waters, and whether it is legitimate for states to expand the doctrine to protect other resources. As shown below, natural law provides support or explanatory context for both the Roman public trust doctrine and the public trust doctrine as it developed in English common law.

2. Greco-Roman Natural Law and the Roman Public Trust Doctrine

Early Greek philosophers debated the value of public versus common property in a well-ordered society, often arguing against extensive private property in favor of a sharing of common resources.¹⁹⁴ This is perhaps most notable Plato’s *Utopia*¹⁹⁵ but also in the work of other Greek philosophers who questioned the merit of

¹⁸⁶ See *Arizona Center for Law in the Public Interest*, 837 P.2d at 166.

¹⁸⁷ *Robinson Twp.*, 83 A.3d at 947.

¹⁸⁸ *Id.* at 640-41.

¹⁸⁹ PA. CONST. art. I, §27.

¹⁹⁰ For a detailed history and interpretation of amendment, see John C. Dernbach, *Taking the Pennsylvania Constitution Seriously When It Protects the Environment: Part I--An Interpretive Framework for Article I, Section 27*, 103 DICKINSON L. REV. 693 (1999).

¹⁹¹ 83 A.3d at 948.

¹⁹² See *supra* Part II.C.

¹⁹³ See *supra* Part II.D.

¹⁹⁴ Any discussion of egalitarianism in Greek philosophy, of course, must recognize that equal rights were limited to citizens or others in the privileged class, with others relegated to un-propertied slave or servant status. See RUSSELL, *supra* note 44, at 74.

¹⁹⁵ See RUSSELL, *supra* note 44, at 111. It is also an attribute of Thomas More’s *Utopia*, written in the sixteenth century. See *id.* at 519.

unrestricted private property.¹⁹⁶ Aristotle favored private property,¹⁹⁷ however, and the Romans ultimately adopted a system of private property.¹⁹⁸ The fact that Roman law supports private property in general, however, does not presumptively conflict with the Roman public trust doctrine any more than our system of private property conflicts with the American public trust doctrine. Both are consistent with the idea that private property should not necessarily apply to all resources, and that some are more valuable if held in common.

Although there were antecedents,¹⁹⁹ natural law manifested most prominently in Stoic philosophy during the Roman Empire in the first and second centuries A.D.²⁰⁰ Stoicism rejected chance, believing that “the course of nature is rigidly determined by natural laws.”²⁰¹ This idea also had a theistic foundation. The Stoics believed that order “was ordained by a Lawgiver who was also a beneficent Providence.”²⁰²

Facially, Stoic natural law might appear to have little direct relevance to property law. Stoicism focuses on individual behavior and virtue rather than on property and the relationship between the individual and the state.²⁰³ Individuals

¹⁹⁶ See *id.* at 231 (Cynics), 252 (Stoics). But see *id.* at 243, 246 (contrary view of Epicurians).

¹⁹⁷ See *id.* at 188-89.

¹⁹⁸ See WILLIAM WARWICK BUCKLAND, *TEXTBOOK OF ROMAN LAW* 182 (2d ed. 1932) (explaining that wealth or private property could be held in several forms).

¹⁹⁹ See RUSSELL, *supra* note 44, at 11 (noting the influence of the concept of fate on Greek thought, suggesting it as a source of natural law), 27 (discussing early Greek concept of justice as dictated by a natural law that sets eternal boundaries), 114 (explaining the influence of fate or necessity on the concept of justice in Plato’s *Republic*) (1945). See also Hadley Arkes, *A Natural Law Manifesto or an Appeal from the Old Jurisprudence to the New*, 87 NOTRE DAME L. REV. 1245, 1248 (2012) (quoting Aristotle’s view that “law sprang from the nature of only one kind of creature”); Daniel R. Heimbach, *Natural Law in the Public Square*, 2 LIBERTY U. L. REV. 685, 689-91 (2008) (discussing natural law theories of Protagoras, Socrates, Plato, Aristotle, and Cicero); Robert P. George, *Natural Law, the Constitution, and the Theory and Practice of Judicial Review*, 69 FORDHAM L. REV. 2269, 2269 (2001) (tracing natural law theory to Aristotle); Kirk A. Kennedy, *Reaffirming the Natural Law Jurisprudence of Justice Clarence Thomas*, 9 REGENT U. L. REV. 33, 41-44 (1997) (tracing natural law theory from Greek philosophers through the Catholic tradition); Note, *Natural Law for Today’s Lawyer*, 9 STAN. L. REV. 455, 459 n.7 (1957) (noting natural law roots from Greece and Rome, including the Justinian Institutes).

²⁰⁰ See *infra* Part II.E.2.

²⁰¹ RUSSELL, *supra* note 44, at 254. This derives from the scientific philosophy of the atomists that nothing happens by chance; everything obeys natural laws. *Id.* at 66.

²⁰² *Id.* at 254.

²⁰³ See *id.* at 177 (distinguishing between Stoic rejection of materialism in favor of virtue and democratic idea that equality and justice must also include power and property). Any reference to “Greek philosophy,” of course, must reflect that it was, itself, extremely diverse. For example, although Plato pre-dated the stoics by several centuries, his *Utopia* advocated an authoritarian system and envisioned only limited private property. See *id.* at 108, 113-15, 119. The cynics rejected the idea of private property altogether. See *id.* at 231. Aristotle took an intermediate view: “Property should be private, but people should be so

have freedom, but only to the extent that they seek virtue and ignore matters of individual well-being—including property—which are dictated externally.²⁰⁴ The closest idea conceptually to the Enlightenment view of a “social contract” between individuals and government may be Cicero’s justification of the expansion of the Roman Empire as a “natural duty to assemble as many as possible into a single community ‘associated with a common acknowledgement of moral right.’”²⁰⁵ That political rationale for unifying the known world into a single empire, however, said nothing directly about property rights.

Moreover, to the extent that Stoic natural law doctrine relies on a theistic underpinning, it suffers from the same limitation as other religiously grounded tenets of natural law. The Constitution prohibits the government from adopting law based solely on religious principle. Moreover, modern secular sensibility does not typically sanction the idea that God (or a divine “Lawgiver”) has so fixed the course of events through natural law that individuals have little or no control over their fate.

Yet Roman Law scholars link the Roman public trust doctrine to natural law. The *Institutes of Justinian* expressly use the words “by the law of nature.” In addition, Frier notes that the *Institutes* describe natural law as prior to civil law of individual states, and that the notion of *res communes* “antedate[s] the emergence of civil government, which through law gradually establishes and protects other types of property, but ... leaves certain things (the air, the sea, the seashore, larger rivers) in their original, pre-legal condition.”²⁰⁶ This is similar to later Enlightenment theories about the evolution of property from pre-state to state status.²⁰⁷

Moreover, according to at least one historian of philosophy, the Stoics influenced the evolution of natural law and natural rights during the Enlightenment:

The doctrine of natural right, as it appears in the sixteenth, seventeenth, and eighteenth centuries, is a revival of a Stoic doctrine, though with important modifications. It was the Stoics who distinguished *jus naturale* from *jus gentium*. Natural law was derived from first principles of the kind held to underlie all general knowledge. By nature, the Stoics held, all human beings are equal. Marcus Aurelius, in his

trained in benevolence as to allow the use of it to be largely common. Benevolence and generosity are virtues, and without private property they are impossible.” *Id.* at 188-89. For a contemporary example of the degree to which Stoicism focuses on the individual, see generally RYAN HOLLIDAY & STEPHEN HANSELMAN, *THE DAILY STOIC, 366 MEDITATIONS ON WISDOM, PERSEVERANCE, AND THE ART OF LIVING* (2016).

²⁰⁴ See RUSSELL, *supra* note 44, at 254-55. The Stoics defined “virtue” as “a will which is in agreement with Nature.” *Id.* at 254. But see Frier, *supra* note 19, at n.16 (indicating that later Stoics “were actually strong proponents of private property and appropriation”).

²⁰⁵ See Heimbach, *supra* note 199, at 691; see also BUCKLAND, *supra* note 198, at 185 (explaining debate on extent to which rivers were public under Roman Law).

²⁰⁶ Frier, *supra* note 19, at 642-43. See also Ruhl & McGinn, *supra* note 19, at 36-37 (linking the Roman public trust doctrine to “a very early period in human experience, the Golden Age, when no property was held in private, but all in common”).

²⁰⁷ See *infra* Part III.E.3.

Meditations, favours ‘a polity in which there is the same law for all, a polity administered with regard to equal rights and equal freedom of speech, and a kingly government which respects most of all the freedom of the governed.’²⁰⁸

Thus, in the face of centuries of Greco-Roman history in which privileges were reserved for an elite class of nobles or wealthy citizens and merchants, Stoic natural law established the idea of natural rights and human equality. To the extent that the public trust doctrine supports equal access by all members of a society to common resources as a matter of fundamental rights (as opposed to economic efficiency), as explained in the following section, this was a critical evolution.

3. *Enlightenment Natural Law and the English Public Trust Doctrine*

Natural law in the enlightenment supports the English public trust more clearly than is true with respect to Stoic natural law and the Roman public trust because the relationship between individuals and their governments is better reflected in Lockean notions of private versus public property.²⁰⁹ This is important because American courts inherited public trust law from English common law, irrespective of whether Roman civil law had any influence on English public trust law.²¹⁰

Natural law in the Enlightenment is not based primarily on theistic sources.²¹¹ It relies on reason to deduce the theoretically optimal relationship between individuals and the state.²¹² The theory begins with hypothetical pre-political

²⁰⁸ RUSSELL, *supra* note 44, at 270. Russell believed that the “self-evident” truths in the Declaration of Independence reflected the application to political rights of the idea of self-evident maxims in mathematics from Greek geometry. *Id.* at 36.

²⁰⁹ See, e.g., *Prior Appropriation*, *supra* note 1, at 781, 800; Epstein, *supra* note 15, at 2346; Eric T. Freyfogle, *Ethics, Community, and Private Land*, 23 ECOL. L.Q. 631, 636-37 (1996); Morton J. Horowitz, *The History of Public/Private Distinction*, 130 U. PA. L. REV. 1423, 1424 (1982). But see Terry W. Frazier, *Protecting Ecological Integrity Within the Balancing Function of Property Law*, 28 ENVTL. L. 53, 60 (1998) (arguing that “Neo-Lockeans” have lulled environmentalists into use of Lockean ideas).

²¹⁰ See *supra* Part II.B.

²¹¹ It would have been perilous for Reformation and Enlightenment writers to disassociate themselves entirely from religion. See generally Peter Laslett, *Introduction*, in JOHN LOCKE, *THE TWO TREATISES OF GOVERNMENT* (Cambridge Univ. Press. ed., Peter Laslett, ed. 1988) (detailing the political and religious constraints Locke faced in writing the Two Treatises and other works). Often, they cited and analyzed religious text to refute theories such as the divine right of kings supported by others, as was true, for example, for Locke’s entire first treatise. See LOCKE, *supra*, Book I (containing detailed refutation, based Biblical text, of Sir Robert Filmer’s defense of the divine right of kings).

²¹² See *Prior Appropriation*, *supra* note 1, at 757-60; LOCKE, *supra* note 211, Book II, ch. 2, §12 (asserting that there is a law of nature based on reason); ch. 6, §57 (asserting that freedom depends on the law of reason).

societies,²¹³ which Locke and others called “the state of nature,”²¹⁴ and then speculates about the agreements, or “social contracts,” reached by individuals and their rulers in establishing governments.²¹⁵ Individuals in the state of nature enjoyed “perfect freedom,” or liberty, and “perfect equality,” because no government existed to restrict freedom to take whatever action was consistent with the well-being of individuals or their family or other group.²¹⁶ This included unlimited access to the “commons” for purposes of hunting, fishing, gathering, and other activities necessary for subsistence.²¹⁷ In this sense, perfect liberty for all was perfectly egalitarian, but inconsistent with private property because that would limit the ability of anyone but a property owner to engage in hunting, fishing, foraging, and other subsistence activities without trespassing.

This hypothetical state of nature and its unrestricted liberty was feasible under conditions of low population density and a largely hunter-gatherer economy. As human societies grew and evolved, however, several fundamental problems

²¹³ It is not clear whether any of the liberal theorists of the Enlightenment believed literally that early societies acted in the ways they described, as opposed to using hypotheticals to describe and explain their views of more perfect governments. *See* RUSSELL, *supra* note 44, at 550 (describing Hobbes’s *Leviathan* as presenting “an explanatory myth” to explain why people accept government with its limits on freedom). Recent science suggests that humans began to band into primitive societies extremely early in history, see YUVAL NOAH HARARI, *SAPIENS* 22-28 (2015), but also note that early human societies varied dramatically in their social order and forms of governance. *See id.* at 42-45.

²¹⁴ *See* LOCKE, *supra* note 211, Book II, ch. 2; *see also* RUSSELL, *supra* note 44, at 550 (describing Hobbes’ description of the “state of nature”).

²¹⁵ *See* LOCKE, *supra* note 211, Book II, ch. 8 (describing the beginning of political societies). *See also* RUSSELL, *supra* note 44 at 550 (describing Hobbes’s description of the “social contract”). Hobbes differed from Locke and later Rousseau in arguing that the social contract was between individuals agreeing to cede all power to a ruler, thus supporting his views of absolute monarchy. Locke and Rousseau, by contrast, believed the contract was between individuals and their government, thus preserving rights for individuals and preserving the rights of citizens to rebel against their government for violation of the contract. *See* RUSSELL, *supra* note 44, at 551. The degree to which any such “agreements” came in the form of overt discussion and understanding, as opposed to tacit acknowledgment or acceptance, is obviously a matter of sheer speculation and likely varied widely across cultures and societies. More formal and clearly conscious written agreements, in the form of written constitutions or other governance agreements, came much later in history. *See, e.g., Robinson Twp.*, 83 A.3d at 947-48 (explaining that Article I of the Pennsylvania Constitution reflected a “social contract” between the people and the Commonwealth regarding fundamental rights that had been reserved).

²¹⁶ *See* LOCKE, *supra* note 211, Book II, ch. 2, §4; *See also* RUSSELL, *supra* note 44, at 550.

²¹⁷ *See* Freyfogle, *supra* note 209, at 633; CHURCHILL, *supra* note 69, at 7 (describing use of common forests and other resources for hunting and fishing in early Britain); RUSSELL, *supra* note 44, at 634 (noting that the poor status of rural laborers in Locke’s time was mitigated by the commons, to which people had important rights); Robinson, *supra* note 65.

suggested the need for some form of government authority²¹⁸ in which individuals agreed to cede some freedom in return for solutions to those problems. The key question was the degree of liberty individuals were likely willing to concede, and in return for what protections or other services from the government? A fundamental tenet of liberal natural law theory was that individuals would not relinquish liberty absent sufficient offsetting benefits.²¹⁹ Some of those problems—and their solutions—are particularly relevant to the evolution of the public trust doctrine.

First, perfect freedom works until there is conflict between two or more individuals, competing for the same resource or otherwise. Natural law theorists postulated that pre-society individuals were bound by a “Law of Nature ... which obliges every one,” and instructing that “being all equal and independent, no one ought to harm another in his Life, Health, Liberty, or Possessions.”²²⁰ To prevent or redress violations of this fundamental rule, individuals could resort to self-help, grounded in the natural right to self-defense and self-preservation and the obligation to “preserve the rest of Mankind.”²²¹ Locke and others recognized, however, that a society in which individuals judge their own cause is inherently problematic.²²² Thus, it made sense to forego the perfect liberty reflected in self-help in return for a system of impartial justice.

Applying this concept to the public trust doctrine, competition for resources intensified as human population density increased and as economies shifted from hunter-gatherer to agricultural and later commercial and industrial.²²³ Beginning with a theistic perspective, Locke suggested that God gave the Earth to humanity in common, along with all of the fruits of nature.²²⁴ He then reasoned, however, that people must be able to appropriate resources to subsist,²²⁵ and that individuals or groups were not likely to invest their labor and capital in farming or other endeavors involving individual parcels of land or other resources absent security of ownership.²²⁶ That led to Locke’s famous maxim that private property is justified when an individual, through labor or other investment, adds value to a previously

²¹⁸ Social contract theory is irrespective of form of government. People could cede rights to a monarch, an autocracy, or a constitutional republic in return for the benefits of a stable government.

²¹⁹ See LOCKE, *supra* note 211, Book II, ch. 2, §13 (the test of government is how much better it is than the state of nature), Book II, ch. 3, §21 (justifying government to avoid a “state of war” between individuals); Book II, ch. 9 (explaining reasons people agree to enter civil society). This entire idea, of course, presumes that individuals always had significant choice in the matter in the face of physical, economic, or other power imbalances.

²²⁰ LOCKE, *supra* note 211, Book II, ch. 2, §6.

²²¹ *Id.*, Book II., ch.2, §§ 6-7.

²²² *Id.* Book II, ch. 2, §13; Book II, ch. 3, §21.

²²³ See *id.* Book II, ch. 5, §45.

²²⁴ *Id.*, Book II, ch. 5, §§25-26. He included common resources such as water in a fountain, *id.* §29, and fish and wildlife. *Id.* §30.

²²⁵ *Id.* §26.

²²⁶ An alternative, proposed by both Plato and later Thomas More, among others, was a Utopian society in which all wealth was owned collectively. See *supra* note 195.

common resource.²²⁷ Why would one invest time and labor to plant crops, dig for minerals, or engage in other economically useful activities if one could not reap profits from the resulting increase in value?

In accepting private property and its suggested benefits, however, individuals ceded their “perfect freedom” on land reduced to individual ownership.²²⁸ But societies needed to decide which resources remained so fundamental to the common welfare that more collective liberty and welfare would be lost by allowing private ownership than society gained by privatizing those resources.²²⁹ Indeed, even as the parent of our liberal theory of private property rights, Locke noted that private property was justified only “where there is enough, and as good left in common for others,”²³⁰ that commons remain so by compact,²³¹ and that governments have the authority to retain land in public ownership.²³² Despite changing economies, individuals did not abandon hunting and fishing on common land. Moreover, commerce depended on navigable waters and other common “public highways.”²³³ Allowing private property owners to monopolize public highways and certain other resources was inequitable²³⁴ and could do more to impair than to support growing and evolving economies.²³⁵

The public trust doctrine thus reflects a societal determination, consistent with natural law, about what resources should remain in common to protect liberty and

²²⁷ LOCKE, *supra* note 211, Book II, ch. 5, §27 (“Whatsoever then he removes out of this state that Nature hath provided, and left it in, he hath mixed his Labour with, and joyned to it something that is his own, and thereby makes his Property”); §37 (individual ownership increases land productivity); *see also* Freyfogle, *supra* note 209, at 634 & nn.8-9.

²²⁸ Cf. Eric T. Freyfogle, *Community and the Market in Modern American Property Law*, in LAND, PROPERTY, AND THE ENVIRONMENT 382, 388 (John F. Richards, ed. 2002) (noting that recognition of intensified private land use resulted in loss of community and individual liberty values).

²²⁹ Far from advocating purely individual rights, Locke argued that government was beneficial for the preservation of the “common good.” *See* LOCKE, *supra* note 211, Book II, ch. 9, §131.

²³⁰ *See id.*, Book II, ch. 5, §27.

²³¹ *See id.* §28.

²³² *See id.* §35. In this section Locke, asserts that public land is held in common by compact, but is protected by positive law.

²³³ This explains the intensive focus in early American law on protection of navigable waters as public highways for common use. *See, e.g., Martin*, 416 U.S. at 410, 414; *Pollard’s Lessee*, 44 U.S. at 229; *see generally* Adler, *supra* note 104, at 1684-86.

²³⁴ *See* Eric T. Freyfogle, *Ownership and Ecology*, 43 CASE W. L. REV. 1269, 1295 (1993) (noting that Locke bounded his theory of private property, as a matter of equity, by circumstances in which others have access to similar resources).

²³⁵ *See* Alison Rieser, *Ecological Preservation as a Public Property Right: An Emerging Doctrine in Search of a Theory*, 15 HARV. ENVTL. L. REV. 393, 400-01 (1991) (arguing that common access to some resources promotes greater “scale returns” and higher overall value); Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711, 728-29 (1986) (citing socially optimal resource allocation as justification for public trust theory).

promote the common welfare. Resources such as the “air, the running waters, the sea and the seashore” were logical candidates for common access. Land can easily be parceled in ways that allows everyone to have a fair share for themselves. The same is not true for a river, in which privatization of one segment could allow only some individuals to ship their goods to market, or to charge others monopolistic fees to do so.²³⁶ The precise legal means of doing so, for example via active public ownership (*res publicum*) or through some legal concept of a commons (*res communes*) reflected particular positive law applications of the natural law principle that certain lands and resources were too valuable as a matter of common liberty to cede to private ownership.

4. *The Public Trust Doctrine as an Attribute of Sovereignty*

Courts routinely describe government ownership of public trust resources as an attribute of sovereignty.²³⁷ As emphasized by Chief Justice Taney in *Martin v. Waddell*: “[W]hen the revolution took place, the people of each state became themselves sovereign; and in that character hold the absolute right to all their navigable waters, and the soils under them, for their own common use”²³⁸ This has been true not only for navigable waters, but also for common resources such as wildlife²³⁹ and air.²⁴⁰ Legal scholars also note that the public trust doctrine has roots

²³⁶ See Carol M. Rose, *Given-ness and Gift: Property and the Quest for Environmental Ethics*, 24 ENVTL. L. 1, 2, 6 (1994) (arguing that resources that are beyond anyone’s control, such as air and water, are “outside the comfortable range of property,” as are resources such as entire stocks of fish and wildlife that cannot be compartmentalized into individual parts); see also Craig Anthony Arnold, *The Reconstitution of Property: Property as a Web of Interests*, 26 HARV. ENVTL. L. REV. 281, 309 (2002) (arguing that water is unsuitable for privatization); Epstein, *supra* note 25, at 415 (asserting that each river segment is worth little unless all are subject to common ownership)..

²³⁷ See, e.g., *PPL Montana*, 565 U.S. at 589 (states hold title to beds of navigable waters “in their capacity as sovereigns”); *Idaho v. United States*, 533 U.S. 262, 272 (2001) (ownership of lands submerged by navigable waters is “strongly identified with the sovereign power of government,” quoting *Montana v. United States*, 450 U.S. 544, 552 (1981)); *Coeur d’Alene Tribe of Idaho*, 521 U.S. at 286 (describing “the perceived character of submerged lands, a perception which underlies and informs the principle that these lands are tied in a unique way to sovereignty”); *Pollard*, 44 U.S. at 221 (providing rationale for state trust ownership under equal footing doctrine justified because new states have the “same rights of freedom, sovereignty, and independence” as existing states).

²³⁸ 41 U.S. at 410. See also *Arnold*, 6 N.J.L. at 49 (“the wisdom of [English] law has placed [trust resource] in the hands of the sovereign power, to be held, protected, and regulated for the common use and benefit”), 53 (the people, through their legislatures, manage and regulate trust resources in their sovereign capacity).

²³⁹ See *Geer*, 161 U.S. at 521 (control by the people “in their united sovereignty”).

²⁴⁰ *Georgia v. Tennessee Copper Co.*, 206 U.S. 230 (1907) (“This is a suit by a state for an injury to it in its capacity of quasi-sovereign. In that capacity the state has an interest independent of and behind the titles of its citizens, in all the earth and air within its domain.”)

in sovereignty, implying that sovereign trust duties cannot lightly be altered and may not be eliminated entirely.²⁴¹

Locke's theory of government maintains that people themselves are sovereign and cede only those rights necessary to serve necessary governmental functions.²⁴² One of those essential functions, hence a fundamental obligation of sovereignty, is to protect private property.²⁴³ We would not accept governmental failure to protect private property any more than we would accept its failure to protect us from foreign invasion. As explained above, however, Locke's justification for private property included several conditions designed to prevent some individuals or groups from monopolizing key resources, which would violate the tenet that government exists to maximize collective, not individual, freedom.²⁴⁴ Moreover, Locke's definition of the "property" government is obligated to protect is much broader than either the lay or legal concept of property suggests. It includes "Lives, Liberties, and Estates, which I [Locke] call by the general Name, Property."²⁴⁵ Applying Locke's logic, individuals would not have ceded a large portion of their freedom to the government to protect the rights of the few. Thus, government has as much of a sovereign obligation to protect common property as it does to protect private property.

Natural law reasoning also supports the idea that the sovereign has an obligation to enforce public trust resource protection for the common good. In a "state of nature," who is to ensure that individuals do not take steps to monopolize the commons through force or occupation, even if those uses contravene natural law or community norms? Leaving resolution of any resulting disputes to private action has the same defect of unchecked violence and potentially biased individual judges as those Locke identified with respect to private property.²⁴⁶

Likewise, who is to regulate, manage, or protect common pool resources to ensure they are not overused or otherwise degraded or destroyed? As portrayed most famously by Garrett Hardin in *The Tragedy of the Commons*, unregulated common property incentivizes each individual to consume a greater portion of the resource because the individual reaps all of the resulting profits while accompanying damage to common resources is shared equally.²⁴⁷ Moreover, in many circumstances, degradation of common pool resources is "death by a thousand cuts," in which no individual or small group can be identified as the singular cause of a collective

²⁴¹ See, e.g., WOOD, *supra* note 3, at 125-42; Michael C. Blumm & Courtney Engel, *Proprietary and Sovereign Public Trust Obligations: From Justinian to Hale to Lamprey to Oswego Lake*, 43 VERMONT L. REV. 1 (2018); Torres & Bellinger, *supra* note 18, at 285-86. But see Lazarus, *supra* note 25, at 633 (presenting competing perspective that public property basis for protecting natural resources is giving way to sovereign regulatory power).

²⁴² See *supra* Part II.E.3.

²⁴³ See LOCKE, *supra* note 211, Book II, ch. 9, §§123-24.

²⁴⁴ See *supra* notes 230-33 and accompanying text.

²⁴⁵ LOCKE, *supra* note 203, Book II, ch. 9, §123 (italics and capitalization in original).

²⁴⁶ See *supra* note 223 and accompanying text.

²⁴⁷ Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968) ("Freedom in a commons brings ruin to all").

problem. Climate change is the most profound current example of that phenomenon, but history holds many others.

Again, governments can adopt different positive law means to achieve the end of protecting common trust resources. For example, government can assume formal title to a common resource and manage it accordingly.²⁴⁸ Alternatively, it can decree that certain resources, such as wildlife, are inherently incapable of private ownership, but that use of those resources can be regulated for the public benefit.²⁴⁹ Another option is to allow for usufructuary property rights in defined portions of common resources such as water, but with ownership or public trust oversight held by the common government.²⁵⁰ The precise form chosen as a matter of positive law is less important than the proper assumption by the government of its sovereign obligation to manage and protect public trust resources.

III. IMPLICATIONS OF NATURAL LAW FOR THE PAST AND FUTURE OF THE PUBLIC TRUST DOCTRINE

Prior Appropriation identified several core principles against which to evaluate the legitimacy of claims asserted by western property rights advocates based on prior appropriation. Although these principles are not equally applicable to claims by environmental advocates based on the public trust doctrine, parallel analysis requires that all be analyzed here as well with respect to the public trust doctrine as well. These principles help to explain how the public trust doctrine developed in the past, but they also suggest guidelines for its future evolution.

A. Temporal and Societal Context

The first principle from *Prior Appropriation* is that natural law has not been a fixed concept throughout history. It reflects the political and social context of the time.²⁵¹ Thus, assertions that natural law justifies extensions of prior appropriation doctrine or public trust doctrine, or alternatively that such extensions would upset longstanding legal expectations or contravene democratic principles, “must be analyzed and applied in our current political and social context, not through the lens of a past era.”²⁵²

In the case of prior appropriation, as applied to grazing or other resources, federal positive law governing the public lands makes perfect sense.²⁵³ Federal multiple use management of common resources reflects the current social and

²⁴⁸ This is the legal form used for navigable waters, in which English and American law distinguishes between *jus publicum* and *jus privatum*, with different associated rights and obligations. See *Couer d’Alene Tribe of Idaho*, 521 U.S. at 286; *Shively*, 152 U.S. at 11-14.

²⁴⁹ This is what the U.S. Supreme Court ultimately decided with respect to wildlife. *Hughes*, 441 U.S. at 329-36.

²⁵⁰ See *Nat’l Audubon Society*, 658 P.2d at 712.

²⁵¹ See *Prior Appropriation*, *supra* note 1, at 778-79.

²⁵² *Id.*

²⁵³ See *id.* at 802-04.

political context in which large segments of the public use public lands for recreation and other common uses, while smaller numbers of profit-seeking individuals and businesses use public lands for more traditional resource extraction purposes. To the extent that natural law is relevant to federal land policy, it justifies societal decisions to retain some land and resources in the public domain.²⁵⁴ U.S. positive law supports that regime. Thus, although natural law would also support making public grazing land available for appropriation, natural law ranch advocates bear the burden of convincing the key decisionmaker, Congress, to modify positive law to do so.

Likewise, to the extent that the public trust doctrine has origins in natural law, it should be analyzed and applied through the lens of contemporaneous natural resource use and values. The applicable principle of natural law is that, in forming civil societies, individuals ceded to government the authority to make certain resources available for private property, but to reserve other resources for common use and protection.²⁵⁵ This applies regardless of whether one interprets natural law from a perspective of liberty,²⁵⁶ economic efficiency, or both.²⁵⁷ Collective freedom and economic welfare are both maximized by holding some resources in common rather than privatizing them. As with all concepts of natural law, different societies implement that concept differently through their positive law as appropriate to their circumstances, but natural law remains a tool to evaluate the justice of those choices and modes of implementation.

In early, sparsely settled societies, there may have been little or no need to use positive law to protect common resources that had been shared through local custom and practice.²⁵⁸ That changed as land and resource use intensified, as competition for resources increased, and as individuals or groups sought to monopolize what was formerly common.²⁵⁹ Thus, the Roman public trust doctrine evolved in response to conflicts caused when wealthy citizens built coastal villas that interfered with traditional access by local fishers.²⁶⁰ As manifested in Magna Carta, the Charter of the Forests, and in common law,²⁶¹ the English public trust doctrine protected “ancient rights” to common resource access against the intrusion of the Norman monarchs. The significant focus on navigable waters as the principle but not exclusive contested resource²⁶² made sense for an island nation that relied so heavily on maritime commerce.²⁶³ The same was true in the British Colonies and later the

²⁵⁴ See *supra* Part II.E.

²⁵⁵ See *supra* Part II.E.

²⁵⁶ See Freyfogle, *supra* note 228, at 395.

²⁵⁷ See Epstein, *supra* note 25, at 414-15.

²⁵⁸ See Rose, *supra* note 236, at 13-14.

²⁵⁹ See Freyfogle, *supra* note 228, at 386-88.

²⁶⁰ See Ruhl & McGinn, *supra* note 19, at 49-51.

²⁶¹ See *supra* notes 64-69 and accompanying text.

²⁶² See Russell, *supra* note 44, at 634-35 (describing ongoing controversy over Acts of Parliament that enriched aristocrats by enclosing commons at the expense of commoners).

²⁶³ See Wilkinson, *supra* note 25; Adler, *supra* note 104.

United States, which depended heavily on the use and protection of navigable waters for travel and trade, for subsistence resources, and for national defense.²⁶⁴

In the modern world, resource conflicts have changed and intensified. We face problems never before encountered, some of which could not have been imagined when we entered any particular social contract. Climate change is the clearest and most compelling current example, but it is only one of many with which courts asked to modify or extend the public trust doctrine have struggled in recent decades. Given the common law nature of the public trust doctrine, courts and legislatures are free to apply it to other appropriate resources so long as those applications are consistent with otherwise applicable principles of positive law in the jurisdiction.²⁶⁵

In response to this challenge, both state and federal American courts recognized early in our history that narrow geographic limitations to the concept of navigability that may have applied in England were not appropriate to the geography of North America.²⁶⁶ More recently, courts in diverse U.S. jurisdictions have recognized that the public trust doctrine is grounded in broader principles than protection of the traditional “triad” of navigability doctrine resources (navigation, commerce, and fishing). In expanding public trust protections to include ecological and aesthetic resources and values, for example, the California Supreme Court wrote:

There is a growing public recognition that one of the most important public uses of the tidelands—a use encompassed within the tidelands trust—is the preservation of those lands in their natural state, so that they may serve as ecological units for scientific study, as open space, and environments which provide food and habitat for birds and marine life, and which favorably affect the scenery and climate of the area.²⁶⁷

Public trust cases have involved other common resources that are explained by the same natural law reasoning, such as wildlife,²⁶⁸ wetlands,²⁶⁹ and public parklands.²⁷⁰

The U.S. Supreme Court has enunciated similar principles regarding protection of the atmosphere and other common resources with respect to regional air pollution, but clothed in *parens patriae* language rather than the public trust doctrine.²⁷¹ Extension of public trust principles to the atmosphere would appear to fit squarely within these principles. It is a common resource that is inappropriate for private ownership. It confers common economic and other welfare, including preservation of life itself. Allowing some interests to jeopardize atmospheric integrity impedes

²⁶⁴ See Wilkinson, *supra* note 25; Adler, *supra* note 104.

²⁶⁵ This includes the constitutional prohibition against taking private property without due process and just compensation. U.S. CONST. amend. V. See *infra* Part III.B.

²⁶⁶ See *The Propeller Genesee Chief*, 53 U.S. 443; Carson, 2 Binn. 475; Adler, *supra* note 104, at 1656-59.

²⁶⁷ Marks, 491 P.2d at 380.

²⁶⁸ See *Geer*, 161 U.S. at 522-29.

²⁶⁹ See *Just v. Marinette County*, 201 N.W.2d 761 (Wisc. 1972).

²⁷⁰ See *Gould*, 350 Mass. 410.

²⁷¹ See *Georgia v. Tennessee Copper*, 206 U.S. 230.

individual and collective liberty and welfare, and one the very ends of government Locke identified is “mutual preservation” of those collective values.²⁷²

B. Duty to Obey Positive Law

The second relevant principle from *Prior Appropriation* is that “individuals must respect and obey the positive law of the society in which they live, because that is the foundation on which all civil society is based.”²⁷³ That principle was particularly relevant to property rights asserted by natural law ranch advocates because they used civil disobedience (sometimes in armed confrontations) and overtly asserted that they were not bound by federal law.²⁷⁴ Natural law ranch advocates are entitled to argue for changes in federal land law and policy consistent with their understanding of natural law, but unless they prevail in those arguments through legitimate political or judicial process, they either must obey the law or accept the legal consequences of their actions.²⁷⁵ Proponents of the extension of the public trust doctrine or other assertions of fundamental environmental rights have resorted to civil disobedience as well, however,²⁷⁶ and those actions should be evaluated according to the same principles.

In the United States, individual reliance on theistic versions of natural law to violate positive law is also limited through the Establishment Clause of the First Amendment²⁷⁷ and the Oath or Affirmation Clause in Article VI.²⁷⁸ Religious doctrine cannot confer a legally enforceable source of natural law unless a principle is so universally accepted or independently enshrined in positive law that it has become the law of the land.²⁷⁹ Rather, the federal and state constitutions are the exclusive source of law governing judicial review of duly adopted legislation. Natural law principles, however, may guide cases not addressed directly by

²⁷² See LOCKE, *supra* note 211, Book II., ch. 9, §123. See also *id.* at Book II, ch. 1, §§3, 6 (admonishing that “no one ought to harm another in his Life, Health, Liberty, or Possessions,” and that government power is designed to protect against violations of that principle); Book II, ch. 9, §130 (providing that people part with natural liberty “as the good, prosperity, and safety of the Society shall require”) (capitalization in original).

²⁷³ *Prior Appropriation*, *supra* note 1, at 779.

²⁷⁴ See *id.* at 743-45.

²⁷⁵ See *id.* at 756.

²⁷⁶ See *id.* at 745.

²⁷⁷ U.S. CONST. amend. I.

²⁷⁸ U.S. CONST. art. VI, cl.3.

²⁷⁹ A clear example is that some of the Ten Commandments, such as “Thou shalt not kill” or “Thou shalt not steal” are universally recognized tenets of civil law, although subject to varying implementation. See *Prior Appropriation*, *supra* note 1, at 760-65. Early Puritan settlers recognized the distinction between those portions of the Decalogue that address an individual’s relationship to God as inappropriate for civil law implementation, and those portions that address an individual’s duties in a civil society, which can be the proper subject of civil law. See JOHN M. BARRY, ROGER WILLIAMS AND THE CREATION OF THE AMERICAN SOUL: CHURCH, STATE, AND THE BIRTH OF LIBERTY 206 (2012).

legislation or constitutional provisions, or help jurists fill in gaps in legislation or constitutional provisions.²⁸⁰

Thus, to the extent that natural law ranch advocates rely on personal religious beliefs to justify property rights, those beliefs are not a valid source of legal rights. Congress rejected those assertions through legislation adopted under its Property Clause power, as did the federal courts in interpreting those statutes.²⁸¹ Some faith-based groups support environmental protection agendas,²⁸² and scholars and others have analyzed religious texts regarding the extent to which their teachings support proper stewardship of natural resources.²⁸³ I know of no claims, however, that theistic principles should dictate environmental or natural resources law directly, and certainly not that they should override positive law.

C. Manner of Implementation

The third and final principle identified in *Prior Appropriation* is that the system of law adopted in our constitutional system of government dictates and limits the manner in which concepts of natural law may be used or asserted.²⁸⁴ This implicates both constitutional limits on government action, and institutional or process-based requirements designed to ensure accountability and democratic governance.

1. Constitutional Limits

In the case of the public trust doctrine, the key constitutional issue involves applicability of the provisions of the U.S. Constitution that prohibit unlawful taking of private property without due process and just compensation.²⁸⁵ As is true with

²⁸⁰ See *Prior Appropriation*, *supra* note 1, at 770-78; Babcock, *supra* note 30.

²⁸¹ See *Prior Appropriation*, *supra* note 1, Part II.B.1.b.

²⁸² For example, Pope John Paul II released a statement *Peace with God Creator, Peace with All Creation*, in which environmental protection is framed a moral issue where all are called upon to do their part. http://www.vatican.va/content/john-paul-ii/en/messages/peace/documents/hf_jp-ii_mes_19891208_xxiii-world-day-for-peace.html; For examples in other religious traditions, see, e.g., <http://aytzim.org/resources/educational-materials/155abjeo>; <https://www.buddhistinsightnetwork.org/dia-buddhist-environmental-organizations>; <https://www.greenmuslims.org/>; <https://ldsearthstewardship.org/>.

²⁸³ See generally TORAH OF THE EARTH: EXPLORING 4,000 YEARS OF ECOLOGY IN JEWISH THOUGHT (Arthur Waskow, ed. 2000); see also David Horell & Anna Davis, *Engaging the Bible in GCSE and A Level of Religious Studies: Environmental Studies as a Test Case*, BRITISH J. RELIGIOUS EDUC. Vol. 36, No. 1, 72, 78 (2014); Quiang Luo, *Daoism and Environmental Sustainability-A Completely Different Way of Thinking*, Proceedings of International Workshop on Sustainable City Region, 164-171; Christopher Key Chapple, *Hinduism, Jainism, and Ecology*, The Forum on Religion and Ecology Yale. <http://fore.yale.edu/religion/hinduism/>; Donald K. Swearer *Buddhism and Ecology: Challenge and Promise*, The Forum on Religion and Ecology Yale. <http://fore.yale.edu/religion/buddhism/>.

²⁸⁴ See *Prior Appropriation*, *supra* note 1, at 779-80.

²⁸⁵ U.S. CONST. amend. V, amend IV, §1. See Grant, *supra* note 25.

virtually every other aspect of public trust law, this issue has been hotly debated. Some scholars caution that public trust protection might limit applicability of the doctrine or require compensation to the extent that those protections impair private property.²⁸⁶ Others believe public trust protection is authorized under long-accepted background principles of law, either generally or with respect to specific categories of common property.²⁸⁷

The takings issue has been mitigated to some extent by the familiar “bundle of sticks” concept of property law,²⁸⁸ under which public trust protection need not prevent entirely the privatization of land that contains common pool resources. For example, one can own a parcel of land through which a herd of deer migrates. Under American wildlife law, the landowner does not “own” the herd of deer, which is now considered an “unownable” resource under U.S. law.²⁸⁹ The landowner can, however, exercise the property right to limit access to private property for purposes of hunting those deer, leaving them available for hunting on public or other private lands. The landowner can also reduce individual deer to possession and ownership by successfully hunting them, subject to any applicable state regulations regarding season, bag limits, age and size, etc. Likewise, in the context of the public trust over navigable waters, American courts have accepted the distinction between *jus privatum* and *jus publicum* title to the same property, to serve different purposes; and the federal government retains a navigational servitude in those same waters.²⁹⁰

Early American trust doctrine cases involving shellfish beds illustrate the utility of this more fine-tuned approach to the tension between resources that have more value as a common pool and those that are more efficiently made available as private property. Wild shellfish collected in tidal waters clearly fall within the geographic scope of the English common law public trust. Preserving those resources for common access promoted collective freedom and welfare, particularly in regions of Colonial America in which fishing and foraging for shellfish was essential to subsistence.²⁹¹ Cases such as *Arnold v. Mundy*²⁹² and *Gough v. Bell*,²⁹³ however, involved the rights of individuals to plant oysters in specified parcels of tidal lands for which title for other purposes had been granted to others. Those circumstances implicate the Lockean idea that resources should be available for private ownership so that individuals may reap the profits from their labor and skill in tilling the land and nursing their crops to harvest.

²⁸⁶ See Grant, *supra* note 25; Huffman, *supra* note 25, at 528, 558-59.

²⁸⁷ See Rieser, *supra* note 235; Joseph L. Sax, *Property Rights and the Economy of Nature: Understanding Lucas v. South Carolina Coastal Council*, 45 STAN. LAW. REV. 1433, 1447-50 (1993); Freyfogle, *supra* note 234, at 96-97; Fred P. Bosselman, *Limitations Inherent in the Title to Wetlands at Common Law*, 15 STAN. ENVTL. L.J. 247 (1996).

²⁸⁸ See Arnold, *supra* note 236, at 289-91 (explaining but critiquing “bundle of sticks” metaphor).

²⁸⁹ See *Hughes*, 441 U.S. 322.

²⁹⁰ See Rieser, *supra* note 235, at 398 & n.27.

²⁹¹ See *Martin*, 41 U.S. at 414.

²⁹² 6 N.J.L. 1 (1821).

²⁹³ 22 N.J.L. 441 (1850).

Planting oysters in tidal waters thus falls in a grey area between those resources subject to natural law principles justifying private property and natural law principles justifying common access. That explains why courts struggled with the applicability of public trust principles to those facts and circumstances. It also explains the ultimate resolution that state legislatures, as elected representatives of the people as sovereign, should resolve such middle ground cases of public trust management as a matter of positive law, and as appropriate to the particular circumstances of that jurisdiction. Indeed, the resolution upheld by the New Jersey Supreme Court in *Gough v. Bell* was to allow exclusive oyster beds subject to state regulation.²⁹⁴ That is consistent with the manner in which states regulate the harvesting of other fish and wildlife, and reflects a rational judgment about how to balance private property and public access to the common pool resource of tidal areas suitable for shellfish harvest.

The issue becomes more challenging to the extent that government seeks to extend public trust protection to resources not formerly subject to protection, or that have not previously been recognized as part of the trust “corpus”. How takings jurisprudence applies to those assertions may depend on the degree to which the doctrine inhered in particular forms of property historically.²⁹⁵ For example, the Supreme Court has ruled that the federal navigation servitude is not subject to the strictures of the takings clause.²⁹⁶ Although the navigation servitude cases pre-date *Lucas*, they reflect the fact that the servitude exists as a fundamental attribute of sovereignty that predates any private property rights to the beds of navigable waters.

Indeed, *Illinois Central* involved the takings issue as an important but often-neglected subsidiary issue. Arguably, the real dispute between the majority and the dissent involved takings rather than a fundamental dispute about American public trust law. Justice Field, who was “normally a staunch defender of individual liberty and private property,”²⁹⁷ sanctioned compensation to the extent that the railroad company incurred actual property losses as a result of the legislature’s withdrawal of portions of the original grant, and remanded for a determination of the company’s riparian rights to wharf out.²⁹⁸ In dissent, Justice Shiras did not disagree with the majority’s statement of public rights in navigable waters, but saw no immediate violation of public rights and would have required the legislature to wait to see of the railroad acting in derogation of those rights and to exercise its rights of eminent domain if it believed necessary.²⁹⁹

²⁹⁴ 22 N.J.L. at 456-61.

²⁹⁵ See *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1026-32 (1992) (holding that the takings issue turns on the nature and extent of property loss and the extent to which existing limitations to protect common interests restrict title as a “background principle” of law). A full analysis of the takings issue is beyond the scope of this article but has been addressed elsewhere. See Grant, *supra* note 25.

²⁹⁶ See *supra* note 116 and accompanying text.

²⁹⁷ See Epstein, *supra* note 25, at 423.

²⁹⁸ *Ill. Central R.R. Co.*, 146 U.S. at 439-57.

²⁹⁹ *Id.* at 474 (Shiras, J., dissenting).

Thus, one obvious solution to the takings problem would be for government to compensate landowners for any loss of property rights caused by affording public trust protection to a resource previously not deemed subject to the trust, that is, to use eminent domain power to expand the trust corpus, just as government must use eminent domain to expand its land holdings to build a new road. That solution would be extremely expensive, however, presenting a large disincentive for budget-conscious governments and a tax-averse public to act. Property rights advocates would respond that this would pose a useful, if not essential, check on the tendency of government to expand public trust protections. Government would expand the trust corpus only if it believed that the value to the public was sufficient to incur the accompanying costs.

Imposing this cost on government, however, arguably violates the whole idea of the public trust doctrine, particularly as informed by natural law. Professor Epstein noted that the failure of government to administer the public trust properly by allowing private use—particularly monopolistic use—of trust resources constitutes a kind of reverse eminent domain, an unlawful private taking of public property without due process or just compensation.³⁰⁰ If one accepts the idea that people never agreed to cede that portion of their liberty with respect to natural resources that are fundamental to life, health, and welfare, such as water and air or basic environmental integrity, why should the public need to “buy back” those resources from private property owners who, by virtue of having acquired other property rights, gain monopolistic or other significant control over them?

The core problem, then, is distinguishing between those resources that should be available for private appropriation, and those intended to be reserved in common. As explained above, relying exclusively on those resources that have historically been protected by positive law does not solve the problem, and leads to inappropriately narrow results, because public trust law evolved only as needed to address particular problems relevant at particular times and in particular societies.³⁰¹ The challenge is where and how to apply the public trust doctrine to new, often unforeseen problems. This is directly analogous to the “Griswold problem” in Ninth Amendment jurisprudence.³⁰² The Ninth Amendment may have reserved unenumerated rights that warrant constitutional protection, but if they are not enumerated, how are we to know what counts? The public trust component of the social contract may have reserved certain kinds of resources for common use and benefit, but how are we to know which count?

Although the idea of an atmospheric public trust has generated considerable controversy,³⁰³ it actually seems to present one of the clearest cases for trust protection. That is not so simply because “air” is mentioned expressly in the *Institutes of Justinian*. As others have noted, even to the extent that the *Institutes* accurately portray Roman law, the meaning of this reference is not clear, and there

³⁰⁰ See Epstein, *supra* note 25, at 419.

³⁰¹ See *supra* Part II.A.

³⁰² See *Prior Appropriation*, *supra* note 1, at 777-78.

³⁰³ See *supra* note 3.

is little evidence of its implementation in the Roman Empire.³⁰⁴ It is because the atmosphere is so clearly a fundamental and essential common resource that it is incapable of being divided for purposes of ownership. If navigable waterways merit public trust protection, how can the same not be true for the atmosphere? Moreover, to the extent that public trust protection is a sovereign obligation analogous to national defense or the protection of private property,³⁰⁵ preventing catastrophic climate change appears to be a simple case rather than a close call.

When the issues are not clear, the harder questions are who should decide what resources warrant trust protection, what level of protection to provide, and through what positive law methods. Those issues are addressed in the following section.

2. *Institutional and Process Limits*

One argument against the applicability of vague, unwritten concepts of natural law to confer such wide-reaching power in the face of changing circumstances, at least in the United States and other republican forms of government, is that it threatens principles of representative democracy and allows unbridled judicial activism.³⁰⁶ Reliance on natural law principles that are foundational to our concept of government to inform important decisions about law and policy, however, says nothing about who has the power to make those decisions, when, and under what circumstances. In fact, important structural checks inherent in the separation of powers built into the U.S. Constitution limit the force of this critique.³⁰⁷

First, judicial application of the public trust doctrine is subject to legislative discretion. In the case of the federal government's residual authority to protect navigability, federal courts apply the federal navigational servitude doctrine, but defer to the plenary discretion of Congress in deciding which waterways require protection or improvement for purposes of navigability, and through what means.³⁰⁸ Similarly, because the states retain sovereignty over traditional public trust property, state legislatures have discretion to dispose of trust properties so long as those grants are consistent with or designed to serve the purposes of the trust.³⁰⁹ Thus, state legislatures remain free to check inappropriate state court actions under the public

³⁰⁴ See Ruhl & McGinn, *supra* note 19, at 56-58.

³⁰⁵ See *supra* Part III.E.3.

³⁰⁶ See Huffman, *supra* note 25; Cohen, *supra* note 28, at 252.

³⁰⁷ One scholar proposed that the public trust doctrine be limited entirely to a process-based canon of construction. See William D. Araiza, *The Public Trust Doctrine as an Interpretive Canon*, 45 U.C. DAVIS L. REV. 693 (2012).

³⁰⁸ See *Chandler-Dunbar Co.*, 229 U.S. at 62.

³⁰⁹ See *Appleby*, 271 U.S. at 382-84; *Illinois Central R.R. Co.*, 146 U.S. at 452-53.

trust doctrine.³¹⁰ Whether the Ninth Amendment or other authority establishes a substantive floor on state public trust doctrine responsibility remains to be seen.³¹¹

Second, legislative or executive branch actions pursuant to the public trust doctrine, or actions allegedly in violation of public trust principles, remain subject to judicial review in both federal and state courts (depending on where jurisdiction is found appropriate); and state judicial decisions are subject to review in the U.S. Supreme Court for violation of federal constitutional law. In particular, all interpretations and applications of the public trust doctrine are subject to checks under the U.S. Constitution and the constitutions of many states. Given that any federal authority over public trust resources in navigable waters reflects a cession of those aspects of the trust affecting interstate and foreign commerce, any federal exercise of trust authority is bounded by the scope of the Commerce Clause.³¹² Moreover, as explained above, although federal control over navigability affecting private title to lands beneath navigable waters require no compensation because that title is held subject to the federal navigation servitude, assertions of public trust authority over other public trust resources are subject to takings scrutiny, whether or not that scrutiny ultimately requires compensation.³¹³ Finally, some state constitutions have express provisions defining public trust resources and the principles according to which they must be managed.³¹⁴

In short, the answer to issues of institutional accountability in making and implementing public trust doctrine decisions is not to throw up our collective hands and abandon the trust. It is to ensure, as we do with analogous challenging public decisions, that our system of constitutional checks and balances works as intended.

V. CONCLUSION

At the outset of his classic *The History of Western Philosophy*, Bertrand Russell asked: “Are there really laws of nature, or do we believe in them only because of our innate love of order?”³¹⁵ The same question may be asked about natural law, with a slightly modified response. Is there really such a thing as natural law, or do we believe in it only because of our innate love of justice?

We live in a society governed largely by positive law. That includes our federal and state constitutions, federal and state statutes and regulations, and federal and state judicial decisions that form the body of our common law. Yet none of our public decision makers who formulate and implement positive law, whether

³¹⁰ Professor Babcock appears to agree in arguing that, even if the public trust doctrine is a “legal fiction,” it is a useful fiction in allowing judges to use common law to fill gaps in trust doctrine implementation pending legislative action displacing that common law. See Babcock, *supra* note 30, at 395.

³¹¹ See *supra* Part II.C.

³¹² See *id.*

³¹³ See *supra* Part III.C.1.

³¹⁴ See, e.g., *Robinson Twp.*, 83 A.2d 901; *Ariz. Center for Law in the Public Interest*, 837 P.2d 158.

³¹⁵ RUSSELL, *supra* note 44, at xiii.

legislative, judicial, or executive branch, write on a blank slate. Arguably, secular natural law establishes principles of justice we can use to help form positive law doctrines, or to test whether they comport with our basic values.

As was true with respect to prior appropriation, natural law helps to inform the origins, meaning, and content of the public trust doctrine. It can help us to interpret and apply the doctrine in ways that are most consistent with our political heritage and system of government, and the principles of liberty and welfare they were designed to promote and protect.

Prior Appropriation assumed that natural law claims used to support the two doctrines were inconsistent and needed to be resolved. In a large sense, however, the above analysis shows that the issues in Part I (Prior Appropriation) and Part II (The Public Trust Doctrine) merge. Both involve the degree to which, in forming civil societies, it was desirable to make all property and all resources available for private appropriation and exclusive use and control, or to retain some kinds of property and resources in common. As shown above, both the appropriation and public trust concepts are supported by the Lockean ideals that helped to inform the principles on which our constitutional system of government was based.

Locke and his followers, including the Founders of the American Republic, believed deeply in the value of private property because it can enhance both individual liberty and collective welfare through economic efficiency and productivity. That explains the concept of appropriation. But Locke also admonished that private property should not be used in ways that harm other individuals, or the common welfare. He also acknowledged that some resources can—and should—be retained in common to enhance and protect collective liberty and common welfare. Which resources best fit into which category is a more challenging inquiry. That question is largely determined by positive law as appropriate to different societies and circumstances, but those choices can and should be informed by the natural law principles on which they are premised.

In this context, natural law ranch advocates and public trust doctrine advocates make similar claims, but from opposite sides of this spectrum. Ranch advocates argue for extension of prior appropriation doctrine to include property rights to grazing and other resources on public lands. Federal positive law has rejected that idea in favor of an alternative system of making those resources available through grazing leases and federal regulation to protect the common values of the resource. It is difficult to see how that balance violates any basic principle of natural law.

Public trust advocates argue for an extension of the public trust doctrine to encompass the atmosphere to combat catastrophic global climate change, and other resources they deem essential to the common welfare. Positive law does not yet support all of those claims, but unlike the claims of natural law ranch advocates, neither does it preclude them. Although those claims may pose difficult policy choices, they are consistent with, if not fully supported by, principles of natural law.

Thus, the natural law underpinnings of the public trust doctrine allow flexibility in the manner in which a state or other jurisdiction interprets the scope of the doctrine (the resources to which it applies) and the manner in which the trust is administered (who may access resources and under what conditions). So long as made consistently

with constitutional and other applicable positive law in the jurisdiction, those judgments can change over time as circumstances change and as knowledge and understanding progress. Conceptually, this is no different than other ways in which different jurisdictions implement natural law differences as appropriate to their circumstances and community values but bound by a unifying minimum principle.

The idea of an atmospheric public trust is one good example, and perhaps the most important example of our times, of inherent flexibility in the public trust doctrine. In accepting early in history that “the air” was a shared resource essential to the welfare of all of humanity, neither the Romans nor those who conceptualized the English common law doctrine could have foreseen the dramatic rise in greenhouse gas emissions and the impact it would have on the atmosphere. The sovereign obligation to protect and manage the collective resource, remains, however, despite drastically changing circumstances. Indeed, that obligation is arguably at its highest when those changes jeopardize the resource—and human welfare—so catastrophically.